

Piling Attendant Level 2 Apprenticeship End-Point Assessment Plan

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Piling Attendant Assessment Plan

Foreword

Piling is a highly specialised but niche part of the construction process for any significant project. As such it has a long term challenge to bring in talented people and train them to the level of competence required to ensure that the foundations they are building are constructed safely and meet exacting quality standards. Since 2011 the industry has recruited between 10-20 apprentices a year to sustain the industry.

This new apprenticeship standard and End-Point Assessment (EPA) has been developed with support from the professional body for Piling. The following EPA process has been created by the employer experts who have developed and delivered Piling apprenticeship programmes in the past. Central to this is the requirement that employer experts determine the competence of candidates to work in the industry, with an appropriate structure to ensure quality and objectivity in the outcome of the EPA. The following process has been developed to achieve this end, while working within the constraints the industry has in terms of the limited number of relevant employers, training providers and end-point assessment organisations.

Summary of Assessment

The end-point assessment (EPA) will confirm the individual has the expected knowledge, skills and behavioural competence to support piling operations, as a Piling Attendant, following and complying with a given specification in a working environment that meets customer and employer expectations.

On completion of training and achievement of the qualifications detailed in the *Piling Attendant Apprenticeship Standard*, the employer and assigned workplace mentor (where applicable) will determine when the individual is ready to undertake the EPA. The synoptic EPA will consist of two stages; a technical test and professional interview (see Figure 1). The individual will be expected to gather evidence (*Piling Attendant Log Book* available from the professional body) of their practical experience and competence within the respective Piling Operations technique specified by the *Piling Attendant Apprenticeship Standard*. The professional interview will probe for occupational knowledge and understanding and be structured around the evidence presented within this log book which will be separate to work-based experience gathered toward the vocational qualification. Candidates must pass all elements of the EPA to be considered successful.

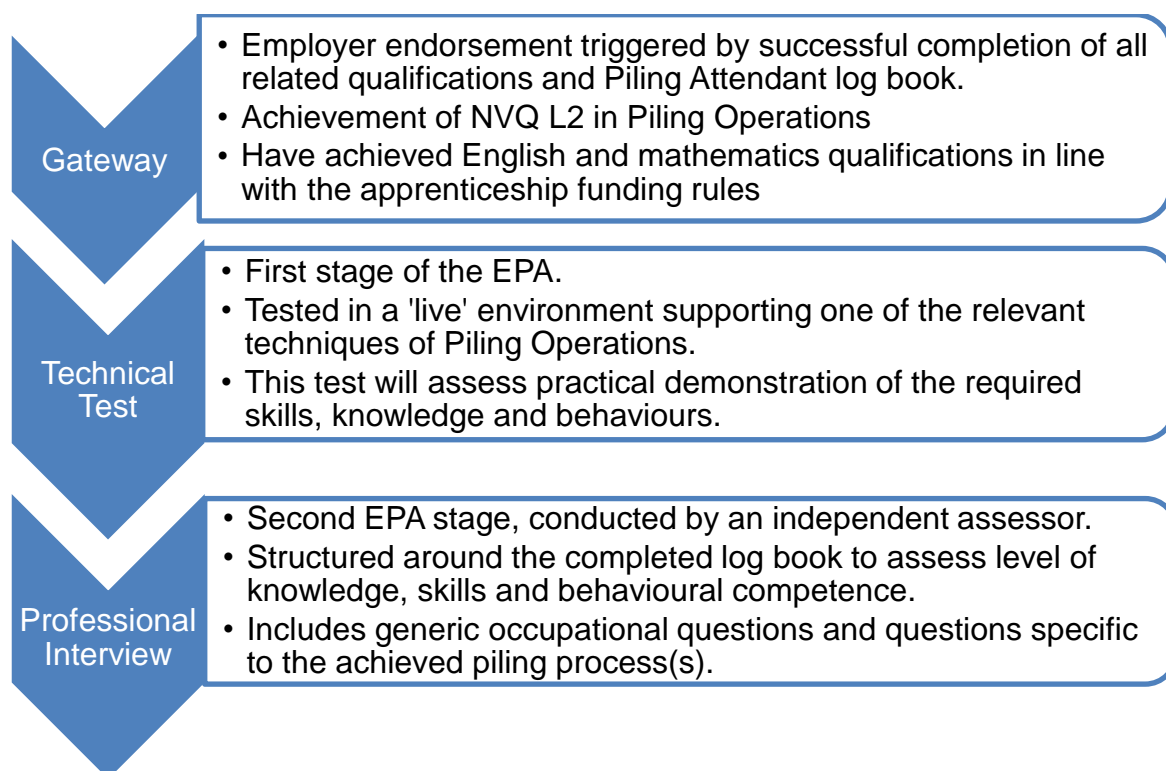


Figure 1: Illustration of the EPA process

Assessment Overview

Assessment Method	Area Assessed	Assessed By	Grading	Weighting
Stage 1. Technical Test for Piling Rig Attendant	Practical application of technical knowledge, skills and behavioural competence within Piling Rig Support Operations	End-point Assessment Organisation	Pass /Fail	50%
Stage 2. Professional Interview	Overall knowledge, skills and behavioural competence		Pass: 40-59% Merit: 60-79% Distinction: 80%+	50%

Professional Qualifications

The knowledge and skills competence described by the *Piling Attendant Apprenticeship Standard* will be achieved through completion of the following qualifications in order to trigger EPA:

- Have achieved English and mathematics qualifications in line with the apprenticeship funding rules.
- Level 2 NVQ in Piling Operations.

On Programme Assessment

Formative assessment will take place as part of the on-programme element of the apprenticeship for the vocational qualification. This will be distinct from the process of acquiring experience with the respective technique in Piling Operations for the EPA recorded in the *Piling Attendant Log Book*.

The employer will determine which piling technique is suitable for the candidate to pursue prior to the EPA. The *Piling Attendant Apprenticeship Standard* states that the individual will develop knowledge of each of the four specified piling techniques, the individual will then be expected to demonstrate skill and practical ability performing as part of the operation within one of these techniques.

Assessment Gateway

The employer will trigger the EPA process once satisfied the individual has demonstrated full competence to the level specified by the *Piling Attendant*

Apprenticeship Standard. The EPA must take place within 6 months of passing through the Gateway.

End Point – Assessment

What

There will be two stages (technical test and professional interview) to the EPA that will assess the overall knowledge, practical and behavioural competence of the individual according to the level stated by the *Piling Apprenticeship Standard*. The summaries of skill, knowledge and behaviour criteria assessed during both stages of the EPA are mapped against the relevant criteria from the apprenticeship standard below.

Technical test (Piling Operations)

This test is carried out first and will be graded pass or fail. The individual will be observed and assessed performing their role as part of the relevant piling operation(s) in a 'live' site environment. The technical skills, behaviour and knowledge assessed are based on criteria derived from the *Piling Attendant Apprenticeship Standard*. EPAOs must develop a bank of questions relating to underpinning knowledge, to ensure sufficient variation and review them regularly (and at least once a year) to ensure they, and the specifications they contain, are fit for purpose.

The (skills and behaviour) assessment criteria will include:	Link to Piling Attendant Apprenticeship Standard:
Demonstrating the roles and responsibilities of a piling attendant	<ul style="list-style-type: none"> • supply information on the activities and progress of the work • apply first aid 'At Work'. • Independent working: take responsibility for safe completion of your own work. • Logical thinking: use clear and valid reasoning when making decisions to undertake the work instructions. • Working effectively: undertake the work in a reliable, safe and productive manner. • Time management: use own time effectively to complete the work instructions to schedule
Preparing (the rig) for work, (awareness and understanding) manufacturers requirements, pre-use checks and communication.	<ul style="list-style-type: none"> • work safely on site and comply with environmentally responsible work practices • contribute to sustainable practices in piling operations • carry out user maintenance on tools, piling plant and machinery

	<ul style="list-style-type: none"> operate powered units, tools, machinery and equipment specific to piling operations (e.g. concrete pumps, generators, compressors agitators, pressure washers or lighting sets) supply information on the activities and progress of the work Effective communication: oral, written, electronic, listening, body language and presentation. Respect: apply equality, diversity and inclusion in dealing with others.
Travelling and manoeuvring, guiding a piling rig.	<ul style="list-style-type: none"> sling and signal the movement of suspended loads during piling operations guide and control the movement and operations of piling plant, machinery and vehicles supply information on the activities and progress of the work
Setting up for work, position and configuration	<ul style="list-style-type: none"> off load and load vehicles manually handle loads sling and signal the movement of suspended loads during piling operations guide and control the movement and operations of piling plant, machinery and vehicles operate powered units, tools, machinery and equipment specific to piling operations (e.g. concrete pumps, generators, compressors agitators, pressure washers or lighting sets) support, work as part of a team, to rig and derig piling plant and machinery supply information on the activities and progress of the work
Working tasks, ensuring piles are installed to specification, compliance with signals and instructions, maintenance of safety (exclusion zones)	<ul style="list-style-type: none"> guide and control the movement and operations of piling plant, machinery and vehicles carry out user maintenance on tools, piling plant and machinery operate powered units, tools, machinery and equipment specific to piling operations (e.g. concrete pumps, generators, compressors agitators, pressure washers or lighting sets) monitor the delivery of concrete and take samples for testing transport, handle, pour, position and lay concrete and protect it for curing identify excavated soils and types of rock supply information on the activities and progress of the work
Shutting down: shut down and secure procedures	<ul style="list-style-type: none"> operate powered units, tools, machinery and equipment specific to piling operations (e.g.

	<p>concrete pumps, generators, compressors agitators, pressure washers or lighting sets)</p> <ul style="list-style-type: none"> • supply information on the activities and progress of the work • work safely on site and comply with environmentally responsible work practices • contribute to sustainable practices in piling operations
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The (knowledge) assessment criteria will include:		Link to Piling Attendant Apprenticeship Standard:
Describing the roles and responsibilities of a Supervisor, Rig Operator and Piling Attendant	<ul style="list-style-type: none"> • the principles of health, safety welfare and environmentally responsible work practices and how they must be applied in relation to the work, to others and to personnel and occupational health • operatives responsibilities under current legislation and official guidance to undertake the work • how to communicate with others and follow organisational procedures to conform to productive work practices including sustainability • how to support piling operations including the duties and responsibilities of other members of the piling team • how to comply with quality requirements when working • how to react in an emergency. 	
Name and explain components, piling rig parts, equipment using piling terminology	<ul style="list-style-type: none"> • how to interpret types of information, drawings, method statements, risk assessments, manufacturers' information, work schedules and specifications 	
Identify and explain work certificates	<ul style="list-style-type: none"> • operatives responsibilities under current legislation and official guidance to undertake the work 	
Explain how to work in close proximity to hazards, overhead and underground and in areas of restricted or limited access	<ul style="list-style-type: none"> • operatives responsibilities under current legislation and official guidance to undertake the work 	
Explain the need for exclusion zones	<ul style="list-style-type: none"> • operatives responsibilities under current legislation and official guidance to undertake the work • how to react in an emergency. 	
Explain loading and unloading procedures	<ul style="list-style-type: none"> • how to handle and move loads manually and with mechanical aids 	

Professional Interview

The professional interview is a recorded competence based interview conducted by an independent assessor assigned by the registered EPAO.

The criteria for the interview will be based on occupational competence and the content of the individual's Piling Attendant log book demonstrating evidence of work completed, witness statements confirming competence and any other supporting documentation as deemed to prove competence. The candidate will be expected to speak credibly about their experiences in the workplace, provide examples of the activities they performed and have a comprehensive understanding of piling operations.

The professional interview will measure knowledge, skills and behaviour of the individual within the following criteria:

The (knowledge and behaviour) assessment criteria will include: Link to Piling Attendant Apprenticeship Standard:	
Professional registration schemes	<ul style="list-style-type: none"> what the specific requirements are for conducting piling operations
Health and safety awareness	<ul style="list-style-type: none"> operatives responsibilities under current legislation and official guidance to undertake the work what the specific requirements are for conducting piling operations assertiveness and confidence: able to resist pressures to work following unsafe practices
Policies, procedures and documentation	<ul style="list-style-type: none"> operatives responsibilities under current legislation and official guidance to undertake the work what the specific requirements are for conducting piling operations how to comply with quality requirements when working .
Supporting piling operations	<ul style="list-style-type: none"> operatives responsibilities under current legislation and official guidance to undertake the work can contribute to sustainable practices in piling operations how to support piling operations including the duties and responsibilities of other members of the piling team

	<ul style="list-style-type: none"> • how to interpret types of information, drawings, method statements, risk assessments, manufacturers' information, work schedules and specifications • how building information modelling supports piling operations • what the specific requirements are for conducting piling operations • how to maintain tools, plant, machinery, lifting accessories and equipment • how to use and what the specific requirements are for operating plant, machinery and equipment • how to comply with quality requirements when working • how to rig and derig piling plant, machinery and equipment • how to react in an emergency. • Teamwork: work effectively and safely with others under minimum supervision • Respect: apply equality, diversity and inclusion in dealing with others.
Basic geology and soil mechanics	<ul style="list-style-type: none"> • how to recognise changes in geology while piling
Concrete technology	<ul style="list-style-type: none"> • how to transport, handle, pour, position, lay and protect concrete for curing • how to take samples • how to comply with quality requirements when working
Piling operation specific to the individual, flight auger, rotary, driven – pre-cast, sheet or vibro	<ul style="list-style-type: none"> • how to rig and derig piling plant, machinery and equipment • the techniques and characteristics of piling processes, to include, but not limited too; Continuous Flight Auger, Rotary Large Diameter, Driven – Pre-cast, sheet, and Vibro
The (skills) assessment criteria will include:	
	Link to Piling Attendant Apprenticeship Standard:
Basic geology and soil mechanics	<ul style="list-style-type: none"> • identify excavated soils and types of rock
Concrete technology	<ul style="list-style-type: none"> • take samples for testing
Piling operation specific to the individual, flight auger, rotary, driven – pre-cast, sheet or vibro	<ul style="list-style-type: none"> • rig and derig piling plant, machinery and equipment • piling processes, to include, but not limited too; Continuous Flight Auger, Rotary Large Diameter, Driven – Pre-cast, sheet, and Vibro

How

The two stages of the EPA may be carried out in isolation depending on cohort size. If there is only one individual attempting EPA the technical test and interview may be conducted in one day. The duration of the technical test is 3 ½ hours (+/-10% at the independent assessors discretion) whilst the professional interview should be 90 minutes (+/- 10% at the independent assessor's discretion). The individual must pass the first stage as a prerequisite to sit the second stage assessment. Ideally, the same independent assessor (appointed by the EPAO) will be involved with both the technical test and the professional interview.

The stages of the EPA are described below:

Stage 1: Technical Test – The individual will be tested as a Piling Rig Attendant. A brief will be provided to the apprentice in line with Annex A and B. The test will be conducted at a location that matches the stipulated requirements (

Annex A – Piling Attendant EPA Technical Test (Resources required). The technical test must take place in a 'live' site environment therefore the EPAO will liaise with the employer in advance to ensure the appropriate test conditions are met. The test will last 3 ½ hours (+/- 10% at the independent assessor's discretion). Note additional time will be required for pre and post-test administration. This part of the EPA will be graded Pass or Fail and act as the gateway to Stage 2. The specification for the technical test can be found Annex B – Piling Attendant EPA Technical Test (Activity detail).

Stage 2: The individual will be interviewed. The individual will be required to submit their completed log book to the EPAO in advance. The purpose of the professional interview will be to encourage the individual to describe (audio and visual aids such as powerpoint may be used) knowledge, skills and behavioural competence acquired over the course of the apprenticeship programme and demonstrate that occupational competence has been achieved. The interview will cover at least one question from each of the core subjects and one from the options depending on the tasks described in the interview and demonstrated in the log book. (Table 1) aligned to the *Piling Apprenticeship Standard*. Answers to these questions will be marked and graded by the EPAO independent assessor.

Employers are concerned with ensuring a consistent, high standard of assessment that is relevant to current industry practice. It is recommended that the format of question(s) and answer(s) be based on explaining the situation, task, analysis and

result (STAR). The professional interview will be conducted in a suitably sized meeting room without distractions. The interview will last 90 minutes (+/- 10% at the independent assessor's discretion) and the performance of the apprentice will be marked and graded, Pass, Merit or Distinction by the interviewers in accordance with the grading criteria set out below.

Who

An independent assessor will have no professional or developmental (training) association with the individual under assessment. The criteria for selecting appropriately qualified assessors is:

- Assessor will have relevant current industry experience, knowledge and understanding of the occupational working area at, or above, the level being assessed. This must be of sufficient depth to be effective and reliable when judging candidates' competence.
- A suitable assessor qualification.
- Assessor's experience, knowledge and understanding could be verified by a combination of:
 - curriculum vitae and employer endorsement
 - references
 - possession of a relevant NVQ/SVQ, or vocationally related qualification
 - corporate membership of a relevant professional institution
 - interview

(The verification process must be recorded and available for audit)

The broad requirements at each stage of the EPA are described below. At the first stage, a vocationally qualified (Piling Operations) tester (assessor) appointed by the registered EPAO will conduct the Piling Rig Attendant technical test. The independent assessor's vocational experience will be congruent to the relevant technique of Piling Operations that the individual undertaking the EPA has been trained to demonstrate.

At the second stage, the professional interview. The assessor will be an independent assessor appointed by the registered EPAO, ideally they will be the same EPAO appointed assessor from the first stage (technical test).

End Point – final judgement

The independent assessor appointed by the EPAO will make the final judgement on the outcome of the EPA.

Re-sit and Re-take information

Apprentices who fail one or more EPA method will be offered the opportunity to take a re-sit or retake. Re-sits or re-takes must not be offered to apprentices wishing to move from pass to distinction. A re-sit does not require further learning, whereas a re-take does.

The apprentice's employer will need to agree that a re-sit or re-take is an appropriate course of action. Apprentices should have a supportive action plan to prepare for the re-sit or re-take.

An individual EPA method re-sit or re-take must be taken during the maximum EPA period otherwise the entire EPA must be retaken.

The maximum grade awarded to a re-sit or re-take will be pass, unless the EPAO identifies exceptional circumstances accounting for the original fail.

EPAOs must ensure that apprentices complete a different skills test when taking a re-sit or re-take.

For the professional interview, apprentices will need to retake the full interview again and a different set of questions must be used. For the skills test, apprentices will need to retake the full test and a different version of the technical test must be used.

The number of resits is not limited but it is important that apprentices are not put forward for EPA until the employer decides the apprentice is ready and believe they can achieve all assessments on their first attempt. Please note, the employer will be responsible for funding any EPA re-sits.

Independence

The EPAO will:

- Meet the requirements for assessors detailed above.
- Be approved and listed on the apprenticeship providers and assessment register (APAR).
- Ensure the assigned independent assessor is entirely independent of and not involved with the delivery of training and assessment during the on-programme period of the apprenticeship.
- Ensure the assigned independent assessor is entirely independent of the employer. This will be supported by the relevant trade federation or association.

End-point –Summary of roles and responsibilities

Assessor	Role
Employer	Conducts a review of competence and will assess 'readiness' of the individual to progress to EPA. Verify evidence of the required activities according to the <i>Piling Attendant Apprenticeship Log</i> .
End Point Assessment Organisation (EPAO)	Coordinates the entire EPA process, provides moderation of the technical test and overall responsibility for decision(s) of the EPA assessors. Provide (where appropriate) feedback to unsuccessful candidates and be equipped to manage appeals or disputes.

Quality Assurance – Internal

To meet the expected internal quality assurances for EPA, EPAO's must have in place the following procedures and guidance:

- Demonstrable and on-going consultation process with current industry and occupational experts in 'live' project site environments. Proposed strategy to maintain this engagement and cascade relevant information through standardisation meetings to the network of appointed assessors.
- Run standardisation events for assessors at least every six months to ensure consistent application of the guidance and consistency in marking within each of the assessment methods; also to ensure assessors are trained in the relevant assessment and moderation processes and undertake regular continued professional development.
- Maintenance procedures for all EPA material(s) to reflect or reference current, legislation, safety, techniques, codes of practice and specific industry or sector or project requirements.
- Demonstrable procedure and process to account for and track the progress of each learner through the EPA cycle, the 'learner assessment journey' must be the principle consideration of these procedures.
- Traceable network of communication and a viable proposal to manage the communication between the lead training provider; employer; individual; (attempting the assessment) and Apprenticeship Certification Body. If absent, a suitable implementation strategy should be proposed along with benchmarked accepted standards and timeframes through a service level agreement system.
- Propose a suitable mechanism to manage the output, within realistic timeframes, of all dependencies to the certification of each individual attempting the EPA i.e. relevant Awarding Organisations for each of the mandatory qualifications; lead training provider; EPA assessors; Apprenticeship Certification body etc. If absent, a suitable implementation strategy should be proposed along with a flag or service level agreement system of accepted standards and timeframes.
- Establish the required liaison with the relevant trade federation or association to appoint occupationally competent assessors.
- Policies and procedures to manage escalated appeals or disputes.
- Establish guidance, policies and procedures that describe the suitable conditions for the location(s) of each stage of the assessment.
- Establish policies and procedures for standardisation of assessment criteria and marking schemes.
- Capacity to establish procedures to conform to the proposed external quality assurance process.

Quality Assurance – External

The external quality assurance (EQA) will be undertaken by Ofqual.

End-point Grading

The Piling Attendant occupation is high risk and safety critical, any potential errors of any part of the operation may have a detrimental effect on others. Therefore, a high and consistent level of practical skill and competence must be set as a minimum in order to ensure piling operations on all construction projects are not compromised. The first stage of the EPA will not be graded above a pass mark which will reflect the benchmark (high) standard of competence and approach to health and safety that is expected. The professional interview held at the second stage of the EPA will be graded according to the specification below in Table 1. Table 2 describes the grading system that will determine the overall grade of the individual following successful completion of both stages of the EPA. The individual will require a pass mark at the first stage and a minimum pass mark of 40% at the second stage to pass the overall EPA.

Table 1: Professional Interview (stage two) grading matrix.

Core Subject	Mark				Total Mark Achieved
	Possible	P	M	D	
Professional Registrations	39	16	24	31	
Health and Safety Awareness Critical	85	34	51	68	
Policies, Procedures and Documentation	92	37	55	74	
Supporting Piling Operations Critical	84	33	50	67	
Basic Geology and Soil Mechanics	30	12	18	24	
Concrete Technology	50	20	30	40	
Options : One from:					
Continuous Flight Auger Critical	120	48	72	96	
Rotary Critical	120	48	72	96	
Sheet or Vibro Critical	120	48	72	96	
Driven Critical	120	48	72	96	
Total	500	200	300	400	

N.B: If a pass is not achieved in **any** the three 'critical' subjects the candidate must be referred for further training.

Table 2: Piling Attendant technical test grading descriptors.

Pass	<ul style="list-style-type: none"> Demonstrates compliance with all company health, safety and environmental processes and policies as well as regulatory requirements and can explain how and why they must be applied in relation to the work, to others and to personnel and occupational health including how to react in an emergency.
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	<ul style="list-style-type: none"> • Can correctly interpret drawings, method statements and specifications. • Can operate powered units, tools, machinery and equipment specific to piling operations and explain their purpose. • Can correctly follow procedures to sling and signal the movement of suspended loads during piling operations • Can off load and load vehicles and manually handle loads correctly, demonstrating a knowledge of manual handling procedures. • Can guide and control the movement and operations of piling plant, machinery and vehicles according to procedures. • Can clearly and accurately communicate information on the activities and progress of the work. • Can work as part of a team, to rig and derig piling plant and machinery. • Can carry out user maintenance on tools, piling plant and machinery and explain the maintenance requirement of each accurately. • Can monitor the delivery of concrete and take samples for testing, demonstrating a knowledge of testing methods. • Can correctly transport, handle, pour, position and lay concrete and protect it for curing, being able to describe the reasons for the methods used. • Can correctly identify excavated soils and types of rock • Can explain sustainable practices in piling operations • Can complete work within the required time allocated, resisting pressures to cut corners.
Fail	<ul style="list-style-type: none"> • Does not meet skill, knowledge and behavioural requirements for a pass.

Table 3: Overall EPA grading matrix.

Assessment area	Weight (%)	Overall Grade				
		Pass	Merit	Distinction	Fail	
Technical test	50	P	P	P	P	F
Interview	50	P	M	D	F	F

F = Fail (0-39%)

P = Pass (40-59%)

M = Merit (60-79%)

D = Distinction (80%+)

Table 4: Piling Attendant interview grading descriptors.

Distinction 80%+	<ul style="list-style-type: none"> • Justification of:
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(including descriptors of all other levels)	<ul style="list-style-type: none"> – the application of operational practices, processes and procedures covering a broad range of Piling techniques – technical requirements and use of appropriate technologies associated with a broad range of piling techniques • Thorough understanding of the relevant piling techniques and principles relative to their occupation • Comprehensive knowledge of industry health, safety and environmental working practices and regulations
Merit 60-79% (including achievement of the 'pass' level descriptors)	<ul style="list-style-type: none"> • Explains in detail, with supporting evidence, the range of required skills, knowledge and behaviours with particular emphasis on: <ul style="list-style-type: none"> – the relevant operational practices, processes and procedures – covering a range of piling techniques relative to their occupation – industry health, safety and environmental working practices and regulations
Pass 40-59%	<ul style="list-style-type: none"> • Provides correct information to describe their understanding of skills, knowledge and behaviours required to undertake their respective role competently, meeting technical experts requirements, with particular emphasis on: • Understands and can describe the impact of their actions on the piling operations they are involved with • Demonstrates compliance with all company health, safety and environmental processes and policies as well as regulatory requirements • Describes why policies and procedures are required
Fail ≤39%	<ul style="list-style-type: none"> • Does not meet skill, knowledge and behavioural requirements for a pass.

Implementation

Consistent End Point – Assessments

Mentioned above, the EPAO will be responsible for setting out the conditions for a suitable technical EPA test environment. Guidance and template professional interview schedules will be available as part of the employer occupational brief. It is recommended that no more than two assessments per day for each site take place during the first stage. The EPAO will show commitment to ensure consistency through effective policy and change management. There should be demonstrable, rational and realistic plans to cascade changes to legislation, relevant industry, and assessment criteria updates to assessors. This may take the form of mandated training or up skilling workshops. A procedure for organisational learning should be in place in response to upheld appeals or disputes or advisory statements issued by the external quality assurance body. Suitable policies will be in place to endorse the continued professional development of assessors, EPA authors and policy makers within the EPAO.

Affordability

The first stage technical assessment will take place during 'live' piling operations; this will reduce the costs of this part of the EPA dramatically. In contrast, testing this competence under simulated conditions, costs would likely include, the Rig and associated machinery or equipment as well as the gang of operatives required to run the operation as a team. Piling should be a 'one-time' event i.e. it is not reasonably possible to run the operation in practice and repeat for the sake of assessment or training. The employer group have decided that a simulated version of the technical EPA would be unfeasible. Therefore, as specified earlier, the technical test will be run as part of 'live' piling operations. The second stage professional interview is expected to run affordably, more candidates can be assessed in one day providing appropriate assessor(s) measures for independence are in place. The professional interviews may be held at any location, therefore negotiation between the employer(s) and EPAOs is possible to determine the most cost effective location option(s). The estimated value of the EPA is on average, up to 10% of the total cost of the apprenticeship.

Volumes

Piling and Geotechnical Engineering is a highly specialised sector that demands specific training and development in order to accumulate appropriate experience in the various techniques. These processes are critical to every construction and infrastructure project, regardless of size and scale. The skills gap in this area is of significant concern in order to meet the demands of the major projects that are proposed in the short to mid-term future. The Piling Attendant Apprenticeship will enable a supported entry route into this complex, high-risk profession. Demand for this apprenticeship is expected to be in the region of up to 50 starts per annum once fully established. This figure will be subject to the demand of the industry with a number of major construction and infrastructure projects within the following sectors set to start over the next three years: Residential; Commercial; Energy; Rail; Port authorities and Highways.

Annex A – Piling Attendant EPA Technical Test (Resources required)

Machine	<ul style="list-style-type: none"> • Purpose built mastered piling rig and ancillary equipment to rig the machine for work activities
Area	<ul style="list-style-type: none"> • Facilities for rig travel and parking • Certified piling platform for piling works to take place • Areas clear of hazards e.g. overhead and underground services and with a designated exclusion zone.
Other Equipment	<ul style="list-style-type: none"> • Piling and ancillary equipment to meet the pile specification <i>Note 1</i> • Fully qualified rig operator and additional supporting labour (including reporting line) <i>Note 2</i> • Resources and materials to ensure the installation of piles <i>Notes 2,3&6</i> • Equipment to remove spoil at the piling location (if required) <i>Note 1&2</i> • Pile layout drawing and pile schedule and/or design <i>Note 5</i> • Permit to dig <i>Note 6</i> • Lifting equipment for piling operations (if required) <i>Note 4</i> • Applicable lifting accessories for all loads (if required) <i>Note 3</i> • Items to create restrictions for manoeuvring (cones, barriers and signage)
Pile specification	<ul style="list-style-type: none"> • Minimum of 20 linear metres <i>Note 7</i>

Notes	<ol style="list-style-type: none"> 1. The machine selected for the test must be in serviceable condition and conform to current legislation. 2. The piling rig operator and other plant operators must be certificated and competent. 3. All lifting accessories must be fit for purpose and certificated. 4. The weight of all loads and or ancillary equipment must be known. 5. Specification detailing position, sequence, type and depth of completed piles.
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	<p>6. All certification, permits to dig and lift plans (where required) must be authorised and current.</p> <p>7. Linear meters are defined by the length and number of piles e.g. 2 x 10 metre piles or 5x4 metre piles etc.</p>
Sequence	<ul style="list-style-type: none"> • Due to the nature of the equipment, piling activities can be undertaken on different rigs, locations and different days if required. The EPA EQA function must be given notice of scheduled EPA tests and provided with full details of any divided tests <p>The test must be completed within a given time (refer to <i>Activity Measurements</i> section)</p>

Annex B – Piling Attendant EPA Technical Test (Activity detail)

Activity instructions

Preparing for work	<ol style="list-style-type: none"> 1. Carry out pre-use checks to all ancillary equipment required for the construction of piles 2. Establish communication methods with the operator 3. Ensure, by communication with the operator, that the rig and or mast is prepared for travelling duties
Travelling and manoeuvring (refer to activity measurements)	<ol style="list-style-type: none"> 4. Guide the rig to the work area by providing directions to the rig operator 5. Guide the rig through restrictions whilst travelling to the work area
Setting up for work	<ol style="list-style-type: none"> 6. Prepare the rig and or mast and ancillary equipment for defined piling works 7. Ensure resources and materials are correct, available and of sufficient quantity etc.
Working task (refer to activity measurements)	<ol style="list-style-type: none"> 8. Locate the rig into the pile position within specified tolerances 9. Ensure the pile is plumb and or at the correct angle throughout the piling activity 10. Ensure the pile is installed to specification 11. Control the working area and maintain the exclusion zone
Completing work	<ol style="list-style-type: none"> 12. On completion of placing each pile, confirm the pile has been constructed to specification 13. Instruct the rig operator to configure the rig for travel and guide the rig to the next position
Shutting down	<ol style="list-style-type: none"> 14. On completion of all activities, instruct the rig operator to configure the rig for travel and guide the rig to a safe parking area on firm level ground 15. Provide specified assistance to the operator for shut-down and securing procedures
Notes	<ul style="list-style-type: none"> • The test may be carried out during actual work and discrepancies allowed for compared to the site activities and pile types including time needed to move to a new pile position • Checks unable to be carried out may be assessed by the assessor using verbal questions • For item 15, instructions for assistance must be defined before shut-down and securing activities begin

Activity Measurements

Manoeuvring restrictions	Maximum width of the rig plus 800mm
Piling Placing	Within 75mm of the given positions (or specified tolerances if less than 75mm)
Pile measurement	Pile complete within vertical tolerance of the specification
Completed pile(s)	At least 20 linear metres
Test timings	The test must be completed within a total accumulated time of 3 ½ (+/- 10% at the assessor's discretion) hours