Institute for Apprenticeships & Technical Education

End-point assessment plan for Papermaker apprenticeship standard

Apprenticeship standard reference number	Apprenticeship standard level	Integrated end-point assessment
ST0296	3	No

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Introduction and overview

This document sets out the requirements for end-point assessment (EPA) for the Papermaker apprenticeship standard. It is for end-point assessment organisations (EPAOs) who need to know how EPA for this apprenticeship must operate. It will also be of interest to papermaker apprentices, their employers and training providers.

Full time apprentices will typically spend 36 months on-programme (before the gateway) working towards the occupational standard, with a minimum of 20% off-the-job training. All apprentices must spend a minimum of 12 months on-programme.

The EPA period should only start, and the EPA be arranged, once the employer is satisfied that the apprentice is deemed to be consistently working at or above the level set out in the occupational standard and all of the pre-requisite gateway requirements for EPA have been met and can be evidenced to an EPAO.

For level 3 apprenticeships and above, apprentices without English and mathematics at level 2 must achieve level 2 prior to taking their EPA.

The EPA must be completed within an EPA period lasting typically three months, after the EPA gateway.

The EPA consists of two discrete assessment methods.

The individual assessment methods will have the following grades:

Assessment method 1: Observation with questioning

- fail
- pass
- distinction

Assessment method 2: Professional discussion

- fail
- pass
- distinction

Performance in the EPA will determine the overall apprenticeship standard grade of:

- fail
- pass
- merit
- distinction

EPA summary table

On-programme (typically 36 months)	Training to develop the occupation standard's knowledge, skills and behaviours (KSBs). Training in English and mathematics to level 2, if required Level 2 NVQ Diploma in Performing Engineering Operations or equivalent
End-point assessment gateway	• Employer is satisfied the apprentice is consistently working at, or above, the level of the occupational standard. • English and mathematics Level 2, as a minimum • Level 2 NVQ Diploma in Performing Engineering Operations or equivalent • Apprentice has compiled a portfolio of evidence, to support the Professional Discussion • The employer must provide the EPAO access to the relevant organisational policies and procedures, as required, to support the observation and professional discussion to ensure the apprentice meets their requirements during EPA.
End-point assessment (which will typically take 3 months)	Assessment method 1: Observation with questioning With the following grades: · fail · pass · distinction Assessment method 2: Professional discussion With the following grades: · fail · pass · distinction Overall EPA/apprenticeship graded: · fail · pass · merit · distinction

Professional recognition	Professional body recognition is not relevant to this occupational apprenticeship.

Length of end-point assessment period

The EPA will be completed within an EPA period lasting typically three months after the EPA gateway.

Order of assessment methods

The assessment methods can be delivered in any order. The result of one assessment method does not need to be known before taking another.

Gateway

The EPA period should only start once the employer is satisfied that the apprentice is consistently working at or above the level set out in the occupational standard, that is to say they are deemed to have achieved occupational competence. In making this decision, the employer may take advice from the apprentice's training provider(s), but the decision must ultimately be made solely by the employer.

In addition to the employer's confirmation that the apprentice is working at or above the level in the occupational standard, the apprentice must have completed the following gateway requirements prior to beginning EPA:

- Achieved English and mathematics Level 2. For those with an education, health and care plan or a legacy statement the apprenticeships English and mathematics minimum requirement is Entry Level 3 and British Sign Language qualification are an alternative to English qualifications for whom this is their primary language.

For Observation with questions:

- no specific requirements

For Professional Discussion supported by 'Portfolio of evidence', the apprentice will be required to submit:

- A portfolio of evidence allowing the apprentice to demonstrate the knowledge, skills and behaviours across the professional discussion criteria set out in the mapping and grading sections of the EPA plan. The portfolio of evidence is used as an aide memoir during the professional discussion. It should be an example of work completed during

the apprenticeship that the apprentice can quickly refer to during the professional discussion to support the answers that are being given.

- Apprentices must compile the portfolio of evidence prior to the gateway and it should contain evidence collected during the on-programme period of the apprenticeship. The portfolio of evidence must contain sufficient evidence to demonstrate the KSBs that will be assessed by the professional discussion.
- The portfolio of evidence will typically contain a minimum of 10 discrete pieces of evidence.
- Evidence must be mapped against the professional discussion KSBs. Evidence may be used to demonstrate more than one KSB; a qualitative as opposed to quantitative approach is required
- Evidence sources may include:
    - workplace documentation, for example job cards/job sheets, check sheets/quality check records, accident records, equipment check/maintenance records, sales records
    - annotated specifications, for example drawings, cutting lists, work instructions
    - annotated photographs
    - CPD records, feedback from colleagues
- This is not a definitive list; other evidence sources are allowable.
- The portfolio of evidence should not include any methods of self-assessment. Any employer contributions should focus on direct observation of evidence (for example witness statements) of competence rather than opinions. The evidence provided must be valid and attributable to the apprentice; the portfolio of evidence must contain a statement from the employer confirming this.
- The portfolio of evidence must be completed at the gateway point.
- The portfolio of evidence is not assessed but is used to support the professional discussion.

Assessment methods

Assessment method 1: Observation with questioning

Overview

This assessment method has one component: observation with questioning.

The rationale for using this assessment method is:

- this is a practical role, best demonstrated through observation
- observation allows the assessment of work tasks in a normal place of work, using tools and equipment with which the apprentice is familiar, which is likely to enable the apprentice to perform at their best

- observation is a cost-effective assessment method, as it makes use of the employer's premises and resources
- the tasks chosen reflect something that would be completed by a papermaker on a regular basis
- the questioning component enables the checking of underpinning knowledge and behaviours

Delivery

Apprentices must be assessed against the KSBs assigned to this assessment method – as shown in mapping of KSBs.

Apprentices must be observed by an independent assessor completing work in a live workplace under normal working conditions using equipment and tools with which they are familiar.

The EPAO must arrange for the observation with questioning to take place, in consultation with the employer. They must agree with the employer what will be observed and the timing of the observation, taking into account workplace operations and schedules. The employer must ensure the correct assessment conditions, materials and equipment/tools are available.

An independent assessor must conduct the observation and questioning, on a one-to-one basis, to ensure quality and rigour.

The observation will take four hours. The observation may be split into discrete sections held over a maximum of one working day. The length of a working day is typically considered to be 7.5 hours. This could be to allow the apprentice to move to different parts of the workplace or for meal/comfort breaks, without the movement time counting towards the assessment duration. Apprentices must be supervised during any breaks in the assessment and must not communicate with anyone else.

The independent assessor has the discretion to increase the time of the observation by up to 10% to allow the apprentice to complete a task at the end of this assessment method.

In advance of the assessment, apprentices must be provided with information on the format of the assessment, including timescales.

The following activities must be observed during the observation:

1. Planning and preparation, for manufacturing or finishing
2. Ensuring machinery is set up to run safely and efficiently to produce the outputs specified in job requirements.
3. Carrying out the manufacture or finishing of one of the following end products: paper, board, tissue or non-wovens
4. Recording and communication of data

The observation should be conducted in the following way, to take account of the occupational context in which the apprentice operates.

Typically, the observation will be covered within one task but may be covered by up to two separate tasks if required. The tasks must be set by the EPAO and must cover the knowledge,

skills and behaviours set out for this assessment method in the mapping section of this EPA plan.

The independent assessor will ask a minimum of 10 questions per task. Questions should be asked after each of the activities outlined above. They may ask follow-up questions where clarification is required. Activities that do not naturally occur during the observation can instead be covered by questioning after the observation, but these questions must be asked within the 4 hour observation window.

The purpose of the questioning is to assess underpinning knowledge and behaviours, or to determine whether the apprentice has reached pass or distinction criteria. EPAOs must provide independent assessors with sample questions however, they can be adapted based on what they have observed.

The independent assessor should consider the level of English that the apprentice is working at and pitch questions using appropriate language to ensure inclusivity. Apprentices are expected to understand and use relevant occupational language.

KSBs observed, and answers to questions, must be documented by the independent assessor, using EPAO documentation.

Evidence from the observation with questioning must be assessed holistically using the grading criteria for this assessment method. The independent assessor must make all grading decisions.

EPAOs must ensure that apprentices have a different observation specification and example questions in the case of re-sits/re-takes.

Venue

The observation can take place in:

- workplace other than the employer's own premises (e.g. premises of a client)
- employer's premises

Support material

As a minimum, EPAOs must produce the following material to support this assessment method:

- observation specifications, including example questions
- assessment recording documentation
- guidance for apprentices and employers

Question development

EPAOs must create example open questions to assess related underpinning KSBs. They must develop 'question banks' of sufficient size to prevent predictability and review them regularly (and at least once a year) to ensure they, and the questions they contain, are fit for purpose.

Assessment Method 2: Professional Discussion underpinned by a portfolio of evidence

Overview

The rationale for this assessment method is:

- it allows the apprentice to be assessed against KSBs which may not naturally occur during the observation or may take too long to observe or do not lend themselves to an observation
- it is supported by a portfolio of evidence, enabling the apprentice to demonstrate the application of skill and behaviours as well as knowledge
- it is cost effective, as apart from a venue it does not require additional resources

Delivery

This assessment will take the form of a professional discussion, which must be appropriately structured to draw out the best of the apprentice's competence and excellence and cover the KSBs assigned to this assessment method.

The professional discussion will be conducted as set out here:

The independent assessor will conduct and assess the professional discussion on a one-to-one basis.

The independent assessor must ask a minimum of 15 open competence-based questions that adequately cover the grading descriptors. They may ask follow up questions where clarification is required.

The professional discussion must last for 90 minutes. The independent assessor has the discretion to increase the time of the professional discussion by up to 10% to allow the apprentice to complete their last answer. Further time may be granted for apprentices with appropriate needs, in-line with the EPAO's Reasonable Adjustments policy.

During this method, the independent assessor must combine questions from the EPAO's question bank and those generated by themselves. A minimum of 7 questions should be taken from the EPAO's question bank. The contents of the portfolio of evidence will influence the questions selected; the assessor will review the portfolio of evidence and then select areas they wish the apprentice to expand on with reference to the identified grading descriptors. The apprentice can use the portfolio of evidence as an aide memoire and to support answers being given.

Apprentices must be assessed against the KSBs assigned to this assessment method as shown in the mapping of KSBs. Apprentices are expected to understand and use relevant occupational language.

Questions must cover the following topics:

- Evidence of operator maintenance
- Use of a range of communication skills
- Understanding of health, safety and environmental considerations

- Company approach to quality and testing
- Knowledge of processes involved in the production of paper, e.g. stock preparation, sheet forming, drying, reel-up
- Continuous improvement activities

Video conferencing can be used to conduct the professional discussion, but the EPAO must have processes in place to verify the identity of the apprentice and ensure the apprentice is not being aided in some way.

The independent assessor must use the assessment tools and procedures that are set by the EPAO to record the professional discussion. The independent assessor will make all grading decisions. Evidence from the questioning must be assessed holistically using the grading criteria for this assessment method.

Venue

The professional discussion can take place in any of the following:

- employer's premises
- a suitable venue selected by the EPAO (e.g. a training provider's premises)

The professional discussion should take place in a quiet room, free from distractions and influence.

Other relevant information

A structured specification and question bank must be developed by EPAOs. The 'question bank' must be of sufficient size to prevent predictability and the EPAO must review it regularly (and at least once a year) to ensure that it, and its content, are fit for purpose. The questions relating to the underpinning knowledge, skills and behaviours, must be varied yet allow assessment of the relevant KSBs.

EPAOs must ensure that apprentices have a different set of questions in the case of re-sits/re-takes.

Independent assessors must be developed and trained by the EPAO in the conduct of professional discussion and reaching consistent judgement.

EPAOs will produce the following material to support this assessment method:

- professional discussion specification
- question bank
- marking materials
- recording documentation

Reasonable adjustments

The EPAO must have in place clear and fair arrangements for making reasonable adjustments for this apprenticeship standard. This should include how an apprentice qualifies for reasonable adjustment and what reasonable adjustments will be made. The adjustments must maintain the validity, reliability and integrity of the assessment methods outlined in this EPA plan.

Weighting of assessment methods

All assessment methods are weighted equally in their contribution to the overall EPA pass grade.

Grading descriptors

Assessment method 1: Observation with questioning

Fail	Pass	Distinction
Does not meet the pass grading descriptors	Apprentice meets all Pass grading descriptors	Apprentice meets all Pass grading descriptors with four or more of the six boxes to be fully achieved from the Distinction grading descriptors

KSBs	Pass	Distinction
Communication K1, B1	Communicates effectively with team members and day managers. Follows company procedures for reporting information. Acts professionally, responsibly and ethically demonstrating honesty, integrity and respect.	N/A
Health, Safety & Environment K2, K3, K31, S2, S3	Completes tasks in a safe and competent way using correct PPE where needed. Follows company practices, processes and procedures associated with safety and environment.	Evaluates the Risk Assessments for the task and identifies where and how practices, processes and procedures could be improved in view of safety or the environment.
Quality & Testing K4, K5, S5	Demonstrates understanding of the quality parameters relating to task. Correctly interprets data from task and uses this to make decisions on quality of product.	Demonstrates an understanding of where quality improvements could be made. Shows awareness of customer complaints and quality issues.
Stock Preparation K6, S6, S7	Prepares fibres in accordance with procedures and tests appropriateness for next stage of process.	Explains other ways of preparing stock with different machines and processes, for example chemical pulps, mechanical pulps or recycled fibres.

	Competently performs operation of machinery appropriate to task.	
Sheet Forming Systems K12, S13, B3	Successfully carries out a task on a paper/board machine in accordance with company procedures. Collaborates with team members and takes personal responsibility for elements of the task.	Explains other ways of forming the sheet with different machines and processes, for example single wire or multi-wire fourdrinier machines.
Engineering S21, S22	Accurately interprets process data generated during the task and makes adjustments if necessary. Performs a simple maintenance task on the equipment being used.	Demonstrates understanding of the need for temperature/pressure/speed parameters and their effect on equipment. Explain how they actively make adjustments in order to improve efficiency. Suggests improvements to maintenance routines.
Continuous Improvement K33, S27	Shows awareness of the KPIs relating to the task and department. Measures current performance against the KPIs.	Explains how the department KPIs relate to the overall company goals and articulates what effect small improvements will have on overall performance.
Fail: apprentices will fail where they do not meet the pass criteria		

Assessment method 2: Professional discussion

Fail	Pass	Distinction
Does not meet the pass grading descriptors	Apprentice meets all Pass grading descriptors	Apprentice meets all Pass grading descriptors with seven or more of the ten boxes to be fully achieved from the Distinction grading descriptors

KSBs	Pass	Distinction
Communication S1	Gives examples of effective communication covering the full range of techniques.	Explains the effects of good and/or bad communication and an understanding of which techniques to use in certain situations.
Health, Safety & Environment B2	Gives an example of a proactive approach to promoting positive safety behaviours.	Explains the implications of allowing unsafe behaviours to go unchallenged.

Quality & Testing S4, B5	Describes the various quality parameters applied to the product and the testing procedures used throughout the manufacturing process.	Demonstrates an understanding of the implications of missing quality parameters on the customer and the business.
Stock Approach K7, K8, K9, K10, K11, S8, S9, S10, S11, S12	Describes the correct processes and procedures involved in stock preparation. Provides examples of a variety of stock approach tasks undertaken.	Explains the effect further down the line of poor stock preparation giving a couple of examples of problems that may occur.
Sheet Forming Systems K12, S13, B3	Demonstrates understanding of the range of different processes for forming sheets from stock. Gives a specific example of carrying out a sheet forming operation.	Articulates the advantages and disadvantages of the different sheet forming processes, and explains their appropriateness for a variety of end uses.
Pressing & Drying K14, K15, K16, K17, K18, K19, S15, S16, S17	Demonstrates understanding of the range of different processes for pressing and drying the sheet. Gives a specific example of carrying out pressing and drying operations.	Explains the impact of the different pressing and drying processes on cost and quality and makes recommendations for improvement within the business.
Coaters & Calendering K20, S18	Describes the calendaring process and the reasons for including this process. Explains the coating process and why coatings are used.	Assesses the organisation's approach to coating and calendering and makes recommendations to implement improvements.
Reel Up & Slitting K21, K22, S19, S20	Describes the reel-up and slitting processes with reference to examples from the portfolio.	Demonstrates understanding that these are potential bottle-neck points in the process, and suggests solutions to avoid this happening.
Engineering K23, K24, K25, K26, K27, K28, K29, K30, S23, B4	Demonstrates a basic understanding of the various engineering systems used in the manufacturing process. Describes the principles of problem solving and gives an example from the portfolio.	Provides at least one example of maintenance work and deep clean activity undertaken and describes the process followed. Illustrates full RCA process with a worked example, explaining the effect on the process.

Continuous Improvement K32, K34, K35, K36, K37, S24, S25, S26, B6, B7	Clearly communicates fundamental Lean concepts and how Lean tools can be applied to deliver business benefits using completed Lean improvement projects as evidence.	Assesses the organisation's approach to Lean strategy and deployment and makes recommendations for improving outcomes.
Fail: apprentices will fail where they do not meet the pass criteria		

Overall EPA grading

Performance in the EPA will determine the apprenticeship grade of fail, pass or distinction.

Independent assessors must individually grade each assessment method, according to the requirements set out in this plan. Restrictions on grading apply where apprentices re-sit/re-take an assessment method – see the re-sit/re-take section.

EPAOs must combine the individual assessment method grades to determine the overall EPA grade.

Apprentices who fail one or more assessment method will be awarded an EPA 'fail.'

In order to gain an overall 'pass' apprentices must achieve a pass in both assessment methods.

In order to gain an overall 'merit,' apprentices must achieve a distinction in observation with questioning or a distinction in the professional discussion, and a pass in the other assessment method.

In order to achieve an overall 'distinction' apprentices must achieve a distinction in both the observation with questioning and professional discussion assessment methods.

Grades from individual assessment methods must be combined in the following way to determine the grade of the EPA as a whole:

Assessment method 1 - observation with questioning	Assessment method 2 – professional discussion	Overall grading
Fail	Any grade	Fail
Any grade	Fail	Fail
Pass	Pass	Pass
Distinction	Pass	Merit
Pass	Distinction	Merit
Distinction	Distinction	Distinction

Re-sits and re-takes

Apprentices who fail one or more assessment method will be offered the opportunity to take a re-sit or a re-take. A re-sit does not require further learning, whereas a re-take does.

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

An apprentice who fails an assessment method, and therefore the EPA in the first instance, will be required to re-sit or re-take any failed assessment methods only.

Any assessment method re-sit or re-take must be taken within three-months of the fail notification, otherwise the entire EPA must be taken again, unless in the opinion of the EPAO exceptional circumstances apply outside the control of the apprentice or their employer.

Re-sits and re-takes are not offered to apprentices wishing to move from pass to merit/distinction or merit to distinction.

Where any assessment method has to be re-sat or re-taken, the apprentice will be awarded a maximum EPA grade of pass, unless the EPAO determines there are exceptional circumstances requiring a re-sit or re-take.

Roles and responsibilities

Role	Responsibility
Apprentice	• participate in development opportunities to improve their knowledge skills and behaviours as outlined in the standard • meet all gateway requirements when advised by the employer • understand the purpose and importance of EPA and undertake EPA
Employer	• support the apprentice to achieve the KSBs outlined in the standard to their best ability • determines when the apprentice is working at or above the level outlined in the standard and is ready for EPA • select the EPAO • confirm all EPA gateway requirements have been met • confirm arrangements with EPAO for the EPA (who, when, where) in a timely manner • ensure apprentice is well prepared for the EPA • should not be involved in the delivery of the EPA
EPAO	As a minimum EPAOs should: • understand the occupational role • appoint administrators/invigilators and markers to administer/invigilate and mark the EPA

	• provide training and CPD to the independent assessors they employ to undertake the EPA • provide adequate information, advice and guidance documentation to enable apprentices, employers and providers to prepare for the EPA • deliver the end-point assessment outlined in this EPA plan in a timely manner • prepare and provide all required material and resources required for delivery of the EPA in-line with best practices • use appropriate assessment recording documentation to ensure a clear and auditable mechanism for providing assessment decision feedback to the apprentice • have no direct connection with the apprentice, their employer or training provider i.e. there must be no conflict of interest • maintain robust internal quality assurance (IQA) procedures and processes, and conducts thiese on a regular basis • conform to the requirements of the nominated external quality assurance body • organise standardisation events and activities in accordance with this plan's IQA section • organise and conduct moderation of independent assessors' marking in accordance with this plan • have, and operate, an appeals process • arrange for certification with the relevant training provider
Independent assessor	As a minimum an independent assessor should: • understand the standard and assessment plan • deliver the end-point assessment in-line with the EPA plan • comply to the IQA requirements of the EPAO • be independent of the apprentice, their employer and training provider(s) i.e. there must be no conflict of interest • satisfy the criteria outlined in this EPA plan • hold or be working towards an independent assessor qualification e.g. A1 and have had training from their EPAO in terms of good assessment practice, operating the assessment tools and grading • have the capability to assess the apprentice at this level • attend the required number of EPAOs standardisation and training events per year (as defined in the IQA section)
Training provider	As a minimum the training provider should: • work with the employer to ensure that the apprentice is given the opportunities to develop the KSBs outlined in the standard and monitor their progress during the on-programme period • advise the employer, upon request, on the apprentice's readiness for EPA prior to the gateway • Plays no part in the EPA itself

Internal Quality Assurance (IQA)

Internal quality assurance refers to the requirements that EPA organisations must have in place to ensure consistent (reliable) and accurate (valid) assessment decisions. EPA organisations for this EPA must:

- appoint independent assessors who have knowledge and competence in Papermaking
- appoint independent assessors who have recent relevant experience of the occupation/sector at least the same level as the apprentice gained in the last three years or significant experience of the occupation/sector
- appoint independent assessors who are competent to deliver the end-point assessment
- provide training for independent assessors in terms of good assessment practice, operating the assessment tools and grading
- have robust quality assurance systems and procedures that support fair, reliable and consistent assessment across the organisation and over time
- operate induction training and standardisation events for independent assessors when they begin working for the EPAO on this standard and before they deliver an updated assessment method for the first time
- ensure independent assessors attend standardisation events on an ongoing basis and at least once per year

Affordability

Affordability of the EPA will be aided by using at least some of the following practice:

- using an employer's premises, equipment and resources for observation with questioning
- apprentices should be contributing to workplace operations during the observation with questioning

Professional body recognition

Professional body recognition is not relevant to this occupational apprenticeship.

Mapping of knowledge, skills and behaviours (KSBs)

KSB code	KSB statement	Methods mapped against
Knowledge		
K1	Systems and processes associated with exchange/recording of information required for the role.	Assessment method 1
K2	Site and process safety, environment and risk management systems.	Assessment method 1
K3	Compliance with statutory, industry and company health, safety and environmental regulations.	Assessment method 1
K4	Quality processes and procedures to meet the requirements of quality standards relevant to the organization.	Assessment method 1
K5	Quality compliance requirements.	Assessment method 1
K6	Mechanical pulpers, chemical pulpers, refiners, de-inkers or other such equipment are used to produce optimal flow and required specifications.	Assessment method 1
K7	How fibres react with chemicals.	Assessment method 2
K8	Calculate optimal flow rates using chemicals.	Assessment method 2
K9	Flow in pipes.	Assessment method 2
K10	Vessels including holding and mixing.	Assessment method 2
K11	Chemical additives including process aids and functional aids.	Assessment method 2
K12	Fourdrinier, twin wire systems, multi ply, mould machines or other machines to produce paper for a specific sector.	Assessment method 1
K13	Control sheet forming and drainage through use of control settings of material flow and drainage components.	Assessment method 2
K14	Primary objectives of pressing.	Assessment method 2
K15	Types of presses.	Assessment method 2
K16	Press rolls.	Assessment method 2
K17	Press felts & dry wires.	Assessment method 2
K18	Drying Systems.	Assessment method 2
K19	Steam and Condensate Systems.	Assessment method 2
K20	Calandering systems to gain customer paper specifications.	Assessment method 2
K21	Reel up systems for optimum reel.	Assessment method 2

K22	Slitting systems.	Assessment method 2
K23	Lubrication systems.	Assessment method 2
K24	Basic Air systems.	Assessment method 2
K25	Pump systems.	Assessment method 2
K26	Basic Hydraulics	Assessment method 2
K27	Structures problem solving.	Assessment method 2
K28	Route cause analysis.	Assessment method 2
K29	Fault finding techniques.	Assessment method 2
K30	Basic electrical supply.	Assessment method 2
K31	Health and Safety.	Assessment method 1
K32	8 Wastes.	Assessment method 2
K33	Key Performance Indicators (KPIs)	Assessment method 1
K34	Process Flow Analysis.	Assessment method 2
K35	Problems Solving Techniques, 5s – Workplace Organization, Visual Management Systems.	Assessment method 2
K36	Standard Operating Procedures.	Assessment method 2
K37	Single Minute Exchange of Die.	Assessment method 2
Skills		
S1	Communicate effectively using a full range of techniques: speaking; listening; writing; body language and presentation.	Assessment method 2
S2	Work safely on a paper machine and other specific areas of the mill, maintaining excellent housekeeping.	Assessment method 1
S3	Be aware of environmental controls and impact.	Assessment method 1
S4	Test the paper to site and customer specifications using a variety of testing equipment and methods.	Assessment method 2
S5	Take responsibility for decisions on quality.	Assessment method 1
S6	Prepare fresh water and primary and secondary fibres and test the properties of material.	Assessment method 1
S7	Operate machines such as mechanical pulpers, chemical pulpers, refiners, de-inkers and other such equipment to produce the specifications required for the paper machine for a specific sector.	Assessment method 1
S8	Produce machine stock through mixing of fibres, additives and colours.	Assessment method 2
S9	Control consistency, dilution, screening and cleaning of stock.	Assessment method 2

S10	Control the use of chemical additives to enhance and improve paper properties utilizing sizing, starch, bleaching and brightening agents.	Assessment method 2
S11	Control the use of chemicals to improve runnability such as de-foamers, fixatives and biocides.	Assessment method 2
S12	Carry out in-depth cleaning of chests, vats, silos, pits etc to an acceptable standard.	Assessment method 2
S13	Operate sections of a paper machine for a specific sector, e.g. dryers, reel up	Assessment method 1
S14	Carry out forming wire changes to the relevant paper machine.	Assessment method 2
S15	Mechanically drain paper by use of presses and by use of heat by drying and rolling of these.	Assessment method 2
S16	Test and evaluate the quality properties measured on the running paper and control any changes required.	Assessment method 2
S17	Carry out fabric and dry wire changes appropriate to the relevant paper machine.	Assessment method 2
S18	Prepare coatings according to formulae and utilize these according to customer paper specifications.	Assessment method 2
S19	Operate reel up systems for optimum reel.	Assessment method 2
S20	Operate slitting systems.	Assessment method 2
S21	Measure temperatures, pressures, speeds, and flows; carry out adjustments for any measurement out of specification.	Assessment method 1
S22	Carry out basic operator engineering maintenance such as lubrication, fitting of parts and changing filters etc.	Assessment method 1
S23	Carry out deep cleaning on a variety of equipment.	Assessment method 2
S24	Use the lean tools and techniques to identify waste in stock preparation, paper machines and finishing.	Assessment method 2
S25	Able to identify areas for business improvement	Assessment method 2
S26	Carry out a continuous improvement project in a specific area to improve a process.	Assessment method 2
S27	Use KPIs as a tool for measuring performance.	Assessment method 1
Behaviours		
B1	The required attitudes, behaviours and interpersonal skills associated with the professional workplace.	Assessment method 1
B2	Active promotion of positive safety behaviours at all times	Assessment method 2
B3	The ability to work effectively as an individual and as part of a team.	Assessment method 1

B4	Proactivity in finding solutions to problems.	Assessment method 2
B5	A commitment to quality and continuous improvement.	Assessment method 2
B6	A recognition and appreciation of equality and diversity in the workplace.	Assessment method 2
B7	The ability to handle change and respond to change management processes.	Assessment method 2