

End-Point Assessment (EPA) Plan for

RISK AND SAFETY MANAGEMENT PROFESSIONAL

NON-INTEGRATED DEGREE APPRENTICESHIP

Level 7

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INTRODUCTION

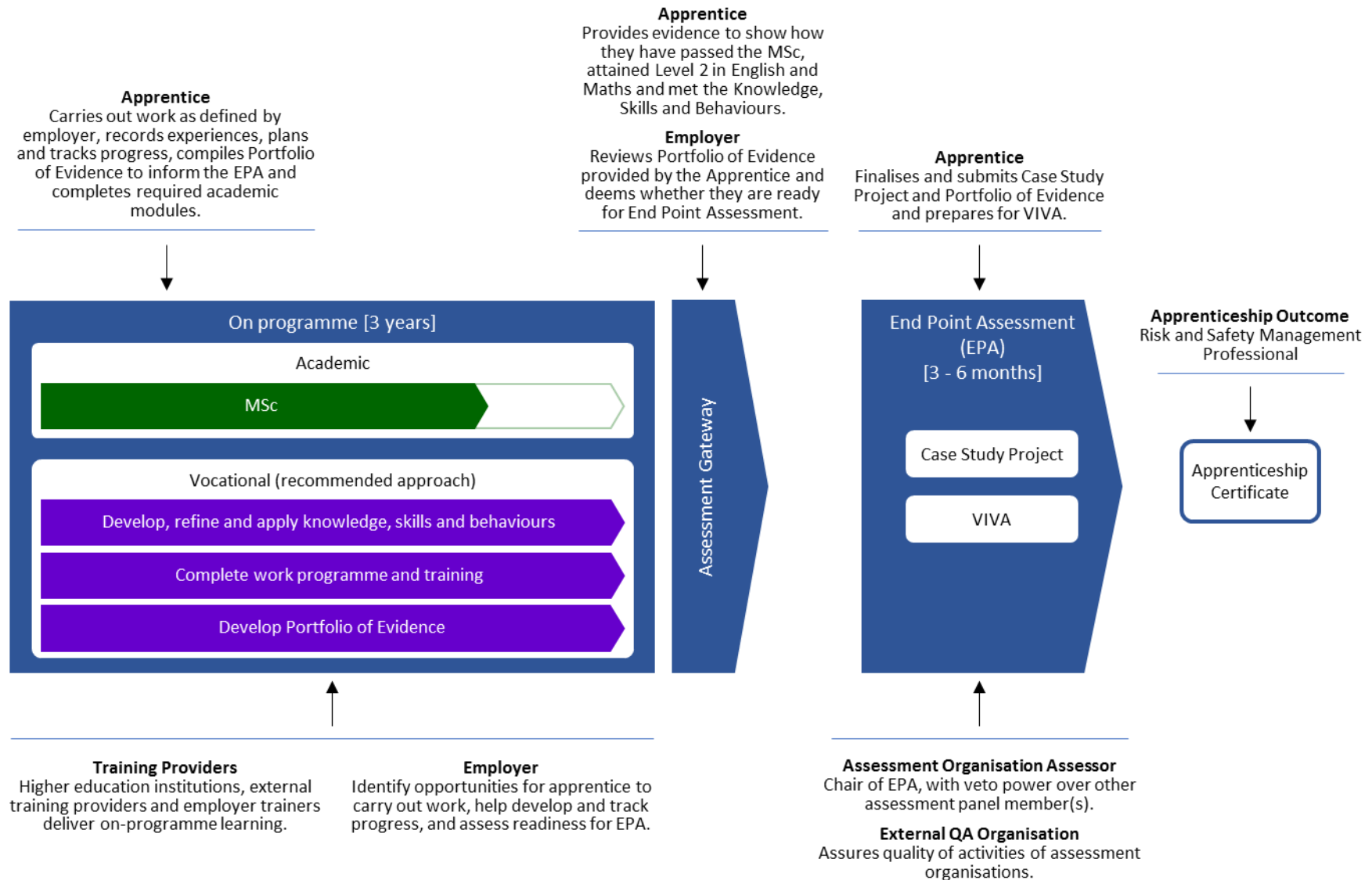
This apprenticeship is a level 7 Non-integrated Degree Apprenticeship in Risk and Safety Management, and is designed to operate as the professional standard for practitioners in risk and safety management roles within highly regulated industries where the impact of loss is high. The Standard and End-Point Assessment (EPA) Plan have been developed by the Risk and Safety Management Employer Trailblazer Group, consisting of small, medium and large employers from the nuclear, defence, oil and gas, aerospace, transport and renewables industries. The group has received support from the Institution of Mechanical Engineers (IMechE), the Institution of Chemical Engineers (IChemE) and the Institution of Engineering and Technology (IET).

Practitioners of risk and safety management work collaboratively with other disciplines to establish the context of the problem, identify all hazards including those with the potential to cause a major accident, analyse the associated risk, evaluate the risk against acceptance criteria and propose ways of treating the risk such that it is eliminated or reduced and maintained at acceptable levels. They are required to address means of monitoring and reviewing the actual risk and safety performance, and communicating and consulting risk issues with all relevant stakeholders.

A glossary of terms, which includes the definitions of the technical terms and command words used within the Assessment Criteria of this EPA Plan, is available via the Risktec website:

<http://www.risktec.tuv.com/media/373590/glossary%20of%20terms.pdf>.

Apprenticeship Overview



SUMMARY OF ASSESSMENT

The duration of the apprenticeship will typically be 3 years. The apprenticeship comprises two parallel 'on-programme' phases (academic and vocational) and an End-Point Assessment (EPA).

Following completion of the academic and vocational learning, there will be an Assessment Gateway, the output of which is a decision about whether the Apprentice is ready for the EPA.

The EPA consists of two synoptic assessment methods: a Case Study Project and a VIVA.

The apprenticeship grade is determined by the performance in the EPA, which will be graded as Distinction, Pass or Fail.

ON-PROGRAMME ASSESSMENT

The apprenticeship is designed so that academic tuition provides each Apprentice with a platform from which they can refine their knowledge, skills and behaviours (KSBs) through vocational learning. The academic learning requires the Apprentice to gain a mandatory MSc qualification.

The Portfolio of Evidence will be used to inform the VIVA and may contain example work or evidential summaries of work conducted during the apprenticeship, and will demonstrate what the Apprentice has learnt and how they have applied this knowledge and skill to real work projects and problems. Evidence within the portfolio should be supported by any documents, presentations, journal entries or other relevant material.

The Portfolio of Evidence should contain the following, as a minimum:

- Definition of what the Apprentice must achieve to complete the apprenticeship, in line with the KSBs in the Standard
- Definition of the learning objectives of each work assignment, showing which KSBs will be met by each learning objective
- A diary of the Apprentice's vocational tasks linked to the learning objectives and achievement of the KSBs

This enables the Apprentice to record and track their development against the Standard.

The recommended approach to delivery of the on-programme learning is included within the Employer Occupational Brief which is available at <http://www.risktec.tuv.com/training-and-education/apprenticeships.aspx>.

It is expected that the Portfolio of Evidence will be compiled during the on-programme phase of the Apprenticeship, so that it can be reviewed by the Employer at the Assessment Gateway, then used to inform the VIVA.

It is good practice for the Employer to provide a mentor to the Apprentice, who should assist the Apprentice in planning, creating and recording evidence in their Portfolio of Evidence, as explained in the Employer Occupational Brief. It is recommended that the Employer conducts a regular review of the evidence to provide assurance regarding progress to both the Employer and the Apprentice during the on-programme phase.

ASSESSMENT GATEWAY

Once the Apprentice has gained their MSc qualification (and Maths and English at Level 2, if they had not achieved these beforehand) and the Employer believes that the apprentice has met all the KSBs in the Standard, an Assessment Gateway can be scheduled.

The Portfolio of Evidence provided by the Apprentice will be reviewed by the Employer, to make certain that it meets the Standard required. When the Employer believes that the Apprentice is competent and is satisfied that the required qualifications are in place, the Apprentice will be deemed ready to enter the EPA process and the EPA will be scheduled.

END-POINT ASSESSMENT

Knowledge, Skills and Behaviours to be Assessed

The EPA assesses and grades the Apprentice's KSBs against the Standard as described in Annex A.

Methods of Assessment

Two methods of assessment are used so that the EPA covers the entire, broad range of KSBs prescribed in the Standard.

The EPA will also be an opportunity for the Panel to:

- Clarify any points and/or probe the Apprentice on any of the KSBs in the Standard
- Explore particular areas of work and understand how they were carried out, along with any problems that the Apprentice encountered and how these were resolved
- Validate the judgements about the quality of the work the Apprentice has completed
- Validate the Apprentice's skills and knowledge and understanding of the company in terms of their products, processes, procedures, tools, equipment, materials, documentation and information systems.
- Make a holistic decision about the grade to be awarded.

The methods of assessment are:

Method 1 – Case Study Project and Presentation

The Case Study Project demonstrates the practical application of the KSBs as indicated in Annex A. It is a documented study of a specific real-life project undertaken by the Apprentice, which will inform a presentation by the Apprentice followed by a question and answer session. The Case Study Project is designed to present realistic, complex and contextually rich situations that can demonstrate the Apprentice's Knowledge, Skills and Behaviours. The Apprentice is required to describe a project that they were actively involved in and the specific tasks that they carried out. They should also analyse any project issues and conflicts, and present their interpretations or solutions, supported by the line of reasoning employed and

assumptions made. The Apprentice may seek advice and guidance from their Employer and colleagues, but the work documented must have been carried out by the Apprentice.

The Case Study Project should meet the following criteria:

- Based on an ongoing project within the Employer's organisation. Some illustrative examples are:
 - Quantitative risk assessment of an offshore oil platform
 - Layer of protection analysis for an onshore chemical facility
 - Safety case for a defence system product
 - Risk assessment for a significant engineering change at a civil nuclear power plant
 - Risk assessment for crane operations at a nuclear-chemical plant
 - Safety assurance programme for a railway upgrade project
- Its focus is agreed with the Assessment Organisation Assessor and the Employer Representative
- Describes the project in sufficient detail so that the Assessment Organisation can understand it and prepare meaningful questions
- Explicitly states which tasks of the project the Apprentice was actively involved in, and the extent of their involvement
- States why those tasks were deemed to be successfully carried out, in order to be able to claim that the KSB has been addressed
- Clearly identifies which KSBs are being addressed for each aspect of the project work
- Covers the KSBs listed in Annex A as being assessed by the Case Study Project.

It may be that the Apprentice is not involved in a large project which provides evidence for all required KSBs. In some circumstances, where a single project does not have enough scope to demonstrate all required KSBs, it is acceptable for the Apprentice to use 2-3 smaller projects instead. For example, if the Apprentice does not have the opportunity to demonstrate Leadership in their initial project, they should include a second project which does. This will be agreed with the Assessment Organisation on a case-by-case basis.

The Case Study Project shall be presented in written format, and must be submitted to the Assessment Organisation six weeks prior to the agreed EPA date. The word count (not including references, table of contents or indexes) should be in the region of 10,000 (with a 10% tolerance on this figure).

It is expected that the typical timeframe for completion of the Case Study project will be 6 months.

The presentation is the Apprentice's opportunity to demonstrate how they have met all KSBs listed as being assessed by the Case Study Project in Annex A. As such, it will be based upon work completed and captured in the Apprentice's Case Study Project. The content should reflect practitioner level understanding in each topic area that it covers. The presentation is expected to be 30 minutes in duration (with a tolerance of 5 minutes on this figure). The presentation will be followed by a question and answer session which will also be 30 minutes in duration (with a tolerance of 5 minutes on this figure). The question and answer session will provide the opportunity for the assessor to seek clarification and probe for further evidence as required.

It is expected that there will be a break of at least 30 minutes between the two assessment methods.

The criteria for achieving a pass or distinction in the Case Study Project are itemised in Annex A. If the Assessor decides that the Case Study Project has not met the criteria for a Pass, it is recommended that the VIVA still takes place, in order to provide comprehensive and thorough feedback to the Apprentice for both forms of assessment.

Method 2 – VIVA

The VIVA is a professional discussion which gives the assessor the opportunity to assess to what extent the Apprentice has met the KSBs listed as being assessed by the VIVA in Annex A.

The Assessment Organisation will develop a bank of questions which can be used by the Independent Assessor during the interview. The Assessment Organisation will develop a structured template for the Assessor to use during the interview, to provide consistency. Guidance regarding the content of the VIVA can be found in Annex B.

The practical requirements for the VIVA are:

- The Apprentice should have at least four weeks' notice of their interview time
- The Apprentice will send a copy of their Portfolio of Evidence to the Assessor at least 7 days before the VIVA.
- The interview is expected to be one hour in duration (with a tolerance of 10 minutes on this figure).
- The Apprentice will take along their Portfolio of Evidence so that it can be referenced during the VIVA
- The VIVA will be conducted face to face or via live video link (where the Assessment Organisation have the facilities available and can guarantee the integrity of the assessment)
- If face to face, it is expected that the VIVA will be conducted at the Employer's location
- The interview will be conducted in a 'controlled environment', i.e. a quiet room, away from the normal place of work
- It is recommended that the VIVA is recorded as an audio or video file.

Assessment Process

The EPA is a convergent assessment of the whole apprenticeship. It is designed to assess the Apprentice against the KSBs as determined by the Standard. The EPA will typically be held at the Employer's premises and each Apprentice will be awarded a Distinction, Pass or Fail by the EPA. The attendance and roles of the EPA Panel are as follows:

| Assessor | Works for | Attendance at EPA? | Role |
|--|---------------------------------------|--------------------|---|
| Assessment Organisation Assessor (Chair) | Assessment Organisation (independent) | Mandatory | Chair |
| Employer Representative | Employer | Mandatory | Observation/advisory role to provide context within the employer and the industrial sector. |

Panel members should be professionals in their field, with the skills and experience to make a valid and reliable judgement. The Assessment Organisation Assessor should be sufficiently competent in the field of risk and safety management in order to be able to make a decision on the Apprentice's overall competency. Their independence, experience and competence will ensure consistent, impartial and fair judgements are made. The Employer Representative is present in order to provide only the subject and domain knowledge, and understanding of the Employer's company systems. They will not be involved in the grading decisions.

| Role | Responsibilities |
|--|--|
| <p>Employer Representative</p> <p>The Employer Representative will typically be amongst the most senior risk and safety experts in the Employer's organisation.</p> | <ul style="list-style-type: none">• Determine whether the Apprentice is ready to be put forward for the EPA, by reviewing their evidence and questioning the Apprentice (the Assessment Gateway)• Agree the focus for the case study project, jointly with the Apprentice and the Assessment Organisation• Participate in the EPA to provide context and clarity regarding the employer and industrial sector.• Must not lead the Apprentice during their VIVA.• Must not influence the grading decisions. <p>Requirements</p> <ul style="list-style-type: none">• Holds a level of understanding above that which is being assessed• Where possible, has not been the line manager of the Apprentice (in very small companies this may not be possible) |

| Role | Responsibilities |
|--|--|
| <p>Assessment Organisation</p> <p>The Assessment Organisation will be responsible for the delivery of the EPA and provides an Internal Quality Assurance (QA) role.</p> | <ul style="list-style-type: none"> • Appoint suitable Assessors with risk and safety management knowledge who are appropriately qualified and experienced in assessment • Provide a programme of training for assessors • Appoint an EPA panel, in line with the requirements stated in this plan • Appoint staff who are able to administer the requirements of this plan • Appoint staff who can undertake the internal QA stated in this plan • Operate internal QA in line with the requirements stated in this plan • Design and develop EPA tools, documentation and processes, including a bank of questions for the EPA interview • Securely record and store all EPA decisions • Administer the certification process • Agree the focus for the Case Study Project, jointly with the Apprentice and the Employer <p>Requirements</p> <ul style="list-style-type: none"> • Registered on the Education and Skills Funding Agency's (ESFA) Register of Apprentice Assessment Organisations (RoAAO) • Management and coordination capability for delivering EPAs • Basic sector knowledge and understanding • An internal QA process • A customer service process • Training and governance plans for long-term sustainability • Geographical coverage |

| Role | Responsibilities |
|--|---|
| <p>Assessment Organisation Assessor</p> <p>The Assessment Organisation Assessor will provide independent review, feedback and assessment during the EPA to ensure that the Apprentice has achieved the required standard.</p> | <ul style="list-style-type: none"> • Organise the EPA • Act as chair of the EPA • Participate in the discussions and ask appropriate questions • Ensure assessors follow the EPA guidance (to ensure consistent assessment) • Review and grade the Case Study Project and VIVA • Ensure the Employer Representative does not lead the Apprentice during the VIVA • Make the final judgement • Record the outcome of the EPA panel • Ensure that the EPA process is followed and the outcome is fair and consistent <p>Requirements</p> <ul style="list-style-type: none"> • No prior engagement with the Apprentice • A minimum of 10 years' experience in risk and safety management • Currently active in risk and safety management • Suitably qualified and experienced in assessment • Understanding of any technical issues which are specific to risk and safety management in the Apprentice's sector, but detailed expert knowledge is not required |

Grading

The EPA will award a grade (Distinction, Pass or Fail) for each of the KSBs listed in the Standard, using the Assessment Criteria stated in the Annex. These grades will then be aggregated into an overall grade for the EPA as follows:

| Assessment Method | Fail | Pass | Distinction |
|--|------------------------------------|---|--|
| Case Study Project and Presentation | One or more KSBs graded as a fail. | All 7 of the KSBs graded as a pass (or above). | 5 or more of the KSBs graded as a distinction, and the remainder graded as a pass. |
| VIVA | One or more KSBs graded as a fail. | All 13 of the KSBs graded as a pass (or above). | 9 or more of the KSBs graded as a distinction, and the remainder graded as a pass. |

Overall Apprenticeship Grade

| | | Method 1 - Case Study Project and Presentation | | |
|-----------------|-------------|--|------|-------------|
| Method 2 - VIVA | Grade | Fail | Pass | Distinction |
| | Fail | Fail | Fail | Fail |
| | Pass | Fail | Pass | Pass |
| | Distinction | Fail | Pass | Distinction |

Achievement of a pass will demonstrate that the apprentice has met all of the requirements of the standard. An Apprentice who achieves a distinction will be demonstrating performance above the requirements of the standard.

Retakes

Where an Apprentice fails the EPA, it may be retaken. It is expected that during the time between EPAs, a period of further learning will need to be undertaken. The Assessment Organisation Assessor will provide advisory comments regarding the reasons for failure. Once these have been addressed the Apprentice will be able to reapply for the EPA. Unless specifically advised, the Apprentice will not be required to repeat both elements of the EPA. Retakes will be capped at a Pass unless the assessment organisation determines there are exceptional circumstances accounting for the fail.

Where the Apprentice has been awarded a Pass, they will not be allowed to retake the EPA to improve their grade.

Final Judgement

The independent Assessor makes the decision about the Apprentice's final grade.

INDEPENDENCE

The independent Assessment Organisation will appoint an independent Assessor who has no connection with the education or training providers, Employer or Apprentice, and is responsible for making the decision about both assessment methods. The independent Assessor will make a holistic assessment of each Apprentice's work, including the grade to be awarded, on the basis of evidence supplied in the Case Study Project and the VIVA, compared to the assessment criteria.

INTERNAL QUALITY ASSURANCE

Employers may select any Assessment Organisation on the Education and Skills Funding Agency's (ESFA) RoAAO who has been approved to offer services against this EPA Plan.

The Assessment Organisation is required to assure the consistency and quality of all of the EPA decisions across all of the Employers that it delivers EPAs for. The Assessment Organisation should achieve this by:

- Developing EPA guidance specific to this Risk and Safety Management Standard that will be used by its Assessors to ensure that all EPAs are conducted and completed consistently against the required specification, to include:
 - Defined competency levels for the Assessors, which might result in some training requirements (e.g. in the practice of interview discussions), before they can become an Approved Assessor
 - Roles and responsibilities for the EPA
 - An EPA process flow, showing any required timings (e.g. notification of EPA result)
 - Reference to the documentation and administration processes
- Developing guidance for Employer Representatives, to include:
 - The required level of sector experience
 - Their responsibilities for the EPA
 - What they can expect from their Assessment Organisation Assessor and how that relationship should work
- Providing guidance for Apprentices on the EPA process, ensuring comparability of evidence and opportunity to demonstrate competence
- Designing and implementing a moderation process that ensures standard assessment judgements across its Assessors and across Employers. This moderation process should include:
 - Details of the monitoring of the assessment outcomes to ensure consistency across Assessors
 - How a number of EPAs, for Apprentices from the same Employer, should be moderated
 - How the moderation will work for a group of Apprentices from different Employers, to ensure alignment and consistency between the different Assessors. This may include:
 - Definition of an acceptable sample size for EPA results to be moderated
 - The appeals process for the EPA
 - How the moderation relates to the required timings for EPA results notifications
 - How the moderation is performed on a risk basis, i.e. new Assessors must have every element of every assessment quality assured, but established, high performing Assessors can be quality assured on a sampling basis, with at least one assessment component being subject to either desk-based or live internal QA activity
- Checking that all Assessors are trained in the guidance and spot checking to ensure that they are using the guidance
- Running a standardisation process/event for Assessors at least annually, to ensure consistency in the practice of marking observations, selection of interview questions and judgement of outcomes
- Operating a complaints and appeals process in relation to the EPA

- Obtaining approval for these guidelines and processes from the External Quality Assurance Organisation
- Addressing reasonable adjustments to be made before the EPA (e.g. access arrangements in the case of any disability that impacts the Apprentice accessing the EPA) and special considerations (e.g. how to make marking adjustments in the event of disruption during the VIVA such as a fire alarm).

EXTERNAL QUALITY ASSURANCE

External Quality Assurance (EQA) arrangements will be put in place to ensure consistency of quality and approach to assessment from all the assessment organisations conducting EPAs for this Standard. EQA of the EPA for this Standard will be provided by the IfA.

IMPLEMENTATION

The overall cost of the apprenticeship will be determined by a number of factors, including the provider of the academic learning, the amount of vocational training and assignments needed and the ability of the Apprentice to demonstrate their KSBs against the required Standard.

EPA Costs

The main element of the EPA cost is the cost of the Assessment Organisation, who organises the EPA and provides the Assessment Organisation Assessor. The exact cost of the Assessment Organisation will be determined by the contractual arrangement between the Employer and the Assessment Organisation and is expected to be in the region of 10% of the total cost of the apprenticeship.

Employers are expected to provide their own personnel for the roles within the EPA. The attendance of the Employer Representative at the EPA is mandatory.

It is expected that the EPA will consist of a day's review of the Case Study Project and Portfolio of Evidence by the Assessment Organisation Assessor, followed by a further half day for the Case Study Project presentation and question and answer session, and the VIVA.

Professional Body Recognition

The following professional bodies have expressed their support for this apprenticeship:

- The Institution of Engineering and Technology (IET).
- The Institution of Chemical Engineers (IChemE).
- The Institution of Mechanical Engineers (IMechE).

This apprenticeship has not been designed to integrate into a specific professional registration process, and professional registration is not an automatic outcome. However, as this apprenticeship provides training and tuition at level 7 and combines academic learning and structured vocational learning and experience, typically over a three year period, it is expected

that an Apprentice will build a Portfolio of Evidence that will be well positioned for professional registration such as CEng.

The academic programmes delivered as part of this apprenticeship will likely be accredited by one or more professional institutions and will therefore contribute towards the requirements for professional registration with that institution.

Volumes

It is anticipated that there will be 50-80 apprentices enrolled on this apprenticeship in year one and 40 annually thereafter. Academic institutions delivering the necessary qualifications are already in existence across the country. Four leading academic institutions are involved at the outset who already have the capacity to flex to increased demand. Demand would need to surge greatly before scalability became an issue. Employers have sufficient qualified personnel to support the apprentice, although guidance and support in relation to the EPA will be required from Assessment Organisations.

ANNEX A: Assessment Matrices

ASSESSMENT METHOD for each element of Knowledge, Skills and Behaviours

| KNOWLEDGE | CASE STUDY PROJECT | VIVA |
|---|---------------------------|-------------|
| Risk Management Principles and Practice | Y | Y |
| Risk Assessment Techniques | Y | Y |
| Domain | | Y |
| Specialisms | | Y |

| SKILLS | CASE STUDY PROJECT | VIVA |
|--|---------------------------|-------------|
| Risk and Safety Management | Y | Y |
| Lifecycle View | Y | Y |
| Leadership | | Y |
| Effective Communication (written) | Y | |
| Effective Communication (oral) | | Y |
| Problem-Finding and Creative Problem-Solving | Y | Y |

| BEHAVIOURS | CASE STUDY PROJECT | VIVA |
|----------------------------------|---------------------------|-------------|
| High Reliability Mindset | | Y |
| Change, Adapting and Visualising | Y | Y |
| Improving | | Y |
| Professional Participation | | Y |

ASSESSMENT CRITERIA for each element of Knowledge, Skills and Behaviours

The following criteria define the minimum level of competence required to achieve a Pass or Distinction for each of the Knowledge, Skills and Behaviours. The apprentice will be deemed to Fail if they do not meet all criteria required to achieve a Pass.

| KNOWLEDGE | DESCRIPTION | CRITERIA FOR PASS | CRITERIA FOR DISTINCTION |
|---|--|---|---|
| Risk Management Principles and Practice | Understand the principles and practice of risk management, including the framework for embedding risk and safety management into the overall management system, and the application of the risk management process. | <ul style="list-style-type: none"> • Discuss the main principles of risk management and how they are applied in practice in the organisation. • Analyse the risk management process and how it is applied in practice in the organisation. | <ul style="list-style-type: none"> • Define the framework for embedding risk management into the overall management system and assess how it is applied in practice in the organisation. • Illustrate the challenges to applying the risk management principles, framework and process in the organisation and generate some solutions to these challenges. |
| Risk Assessment Techniques | <p>Knowledge of the selection and utilisation of systematic techniques for risk assessment that are appropriate to the context.</p> <p>Understand the preferred methods and levels of assessment for particular application in the chosen industrial sector.</p> | <ul style="list-style-type: none"> • Suggest appropriate risk assessment techniques for different contexts relevant to the industry, from qualitative through semi-quantitative to fully quantitative methods. • Criticise the preferred methods in the industry and how they are used in practice. | <ul style="list-style-type: none"> • Explore whether any other risk assessment techniques not normally used in the industry would add value to what is usually done. |
| Domain | <p>Understand the chosen industrial sector, its structure, purposes and operations.</p> <p>Understand how risk and safety management is used and how it interacts with other disciplines within operating companies, their supply chain and other dependent sectors.</p> | <ul style="list-style-type: none"> • Analyse the industry (e.g. how it is structured, key types of organisations and their inter-relationships, and range of activities and significant risks). | <ul style="list-style-type: none"> • Describe the risk and safety management legislation applicable to the industry. • Outline the industry’s culture and key strategic goals, as they relate to risk and safety management. |
| Specialisms | Knowledge of particular specialist subjects and domains as required to meet employers’ needs, for example in relation to emerging technologies or current key focus areas. | <ul style="list-style-type: none"> • Demonstrate expertise in particular specialist subjects as required to meet employers’ needs. | <ul style="list-style-type: none"> • Demonstrate familiarity with specialist subjects outside the direct job role. |

| SKILL | DESCRIPTION | CRITERIA FOR PASS | CRITERIA FOR DISTINCTION |
|----------------------------|--|--|---|
| Risk and Safety Management | Apply knowledge and understanding of risk and safety management to practical situations through the full lifecycle. Ability to recognise the context and accurately select and apply systematic methods of identifying hazards, analysing and evaluating associated risks, and proposing proportionate solutions to treat problems. Aply handle the wider implications of work as a risk and safety practitioner such as application of relevant regulations and emergency planning. | <ul style="list-style-type: none"> • Suggest and correctly apply appropriate methods for identifying hazards, analysing the level of risk, and comparing this with risk criteria. • Develop examples of risk treatment solutions which are proportionate to the level of risk. | <ul style="list-style-type: none"> • Demonstrate how risk and safety management has been applied to meet specific regulatory requirements in the industry. • Examine the range of internal and external factors which can influence the context of risk and safety management. • Illustrate how emergency planning relates to risk assessment. |
| Lifecycle View | Apply approaches to developing risk and safety solutions that will be appropriate throughout the lifecycle of the product or facility. Identify the problems and stakeholder needs from the concept and feasibility phase, through design, operation, modification, decommissioning, demolition and disposal. | <ul style="list-style-type: none"> • Compare and contrast the objectives of risk identification, assessment and treatment at each of the lifecycle stages for a project or product. • Justify which risk management techniques are most appropriate at each stage. • State suitable risk reduction solutions which could be reasonably practicable at each lifecycle stage. | <ul style="list-style-type: none"> • Deduce why the focus of risk management, and the needs of stakeholders, may change depending on the lifecycle stage. |
| Leadership | Critically observe risk and safety leadership behaviours of self and others and reflect on their effectiveness, noting the importance of influence as well as authority. | <ul style="list-style-type: none"> • Critique the behaviours of effective risk and safety leaders, and exhibit some of these behaviours. • Summarise the human factors that contribute to successful risk and safety management. | <ul style="list-style-type: none"> • Compare and contrast the contribution of influence and authority, e.g. by discussing how a situation can be influenced without having authority. |

| SKILL | DESCRIPTION | CRITERIA FOR PASS | CRITERIA FOR DISTINCTION |
|--|--|--|--|
| Effective Communication | Effective written and oral communication, including influencing, negotiating, facilitating and resolving conflicts in risk and safety management with relevant stakeholders. Ability to construct and support risk and safety claims, arguments and evidence in a structured and logical manner. | <ul style="list-style-type: none"> • Apply written communication skills to generate well organised, accurate and clearly written reports and presentations. • Apply version control and review and approval processes and evaluate the importance of this. • Apply written and oral skills to construct and support risk and safety claims, arguments and evidence in an accurate and logical manner. | <ul style="list-style-type: none"> • Give examples of positively influencing others in achieving individual and collective risk and safety management objectives. This is likely to include facilitating and resolving conflicts with stakeholders and the ability to maintain an objective, evidence-based stance. |
| Problem-Finding and Creative Problem-Solving | Identify stakeholders and clarify their needs. Identify and investigate influencing factors and be able to effectively communicate risk and safety problems to relevant stakeholders. Approach problems from different perspectives and work collaboratively with other disciplines. Apply different risk and safety techniques, from the range of tools available, to generate ideas and solutions with others. | <ul style="list-style-type: none"> • Examine the needs of stakeholders and how the risk and safety management process / activities meets those needs. • Assess the feasibility of different solutions to complex problems. • Give examples of approaching problems from different perspectives and working collaboratively. | <ul style="list-style-type: none"> • Comment on the drivers and factors which influence stakeholders' needs and risk perception. |

| BEHAVIOUR | DESCRIPTION | CRITERIA FOR PASS | CRITERIA FOR DISTINCTION |
|----------------------------------|--|--|--|
| High Reliability Mindset | A healthy scepticism about whether systems and processes are working effectively. Challenge and test assumptions and avoid over-simplification of complex risk issues. Conversely, avoids over-complication, and applies a proportionate level of analysis. Courage and conviction in the face of adversity, backing up conclusions with evidence. | <ul style="list-style-type: none"> Assess the weaknesses in systems and processes already in place. Present arguments that are logical and based on consideration of all available evidence. Demonstrate ability to remain calm when under pressure to prove or alter valid conclusions and improvement recommendations. | <ul style="list-style-type: none"> Comment on examples of over-simplification of complex risk and safety issues and develop more appropriate and pragmatic solutions. Suggest examples of over-complication and over-analysis which led to ineffective risk management. |
| Change, Adapting and Visualising | A willingness to recognise and assess change in risk and safety management contexts, whether engineering, organisational or procedural. Reflect on the change and adapt own approach. Open to abstract ideas and concepts as well as real world systems and processes. Communicate visually the concepts and ideas and be able to assess the feasibility of practical solutions. | <ul style="list-style-type: none"> Define change in risk and safety management contexts, whether engineering, organisational or procedural. Risk assess change at a level proportionate to the risk. Apply visually concepts and ideas using shapes, diagrams, metaphors and other relevant visual representations. | <ul style="list-style-type: none"> Suggest abstract ideas and concepts and develop these for real world systems and processes, including alternative solutions, work-arounds and back-up plans. Evaluate the feasibility of different solutions to complex problems, taking account of all relevant factors whether engineering, organisational, procedural or cultural. |
| Improving | A drive to make designs, solutions and processes better from a risk and safety perspective. Work with teams to conjecture, research, innovate and clarify improvements. Co-operative. Solicit stakeholder feedback on proposals and assess benefits and sacrifices to arrive at effective improvements. | <ul style="list-style-type: none"> Analyse the principles of inherent safety and hierarchy of effectiveness of risk controls. Deduce risk reduction measures and evaluate their practicability, including testing their effectiveness in the 'real world'. Develop a coherent, structured ALARP assessment and demonstration. | <ul style="list-style-type: none"> Suggest suitable mechanisms for ongoing monitoring of the effectiveness of risk management systems and processes. Compare and contrast the ALARP approach to risk management against alternatives e.g. prescriptive approach. |

| BEHAVIOUR | DESCRIPTION | CRITERIA FOR PASS | CRITERIA FOR DISTINCTION |
|----------------------------|--|---|---|
| Professional Participation | Plan and review own development needs and carry out CPD. Regularly reflect on own competence and behavioural development. Comply with the obligations of own professional institution. Personal commitment to high standards of professional conduct including reliability, honesty, integrity and ethics. Actively engage in forums advancing risk and safety management as a profession. | <ul style="list-style-type: none">• Plan and review own development needs and carry out CPD to employer's expectations.• Regularly reflect on own competence and behavioural development.• Comply with the obligations of own professional institution.• Actively engage in forums advancing risk and safety management as a profession. | <ul style="list-style-type: none">• Provide evidence of personal commitment to high standards of professional conduct including reliability, honesty, integrity and ethics. |

ANNEX B: VIVA – Example Questions

The Assessor will select questions from a bank of standardised interview questions which will be developed the Apprenticeship Assessment Organisation.

Interview questions must be open, holistic and competency-based in design.

Example Interview Questions

- Describe the role of your organisation within the industry and the culture of the industry as a whole
- Describe an area within risk & safety management where you have developed specialist knowledge
- Provide an example of where you had to influence a situation or resolve a conflict
- Provide an example of where you solved a problem by working collaboratively and approaching it from different perspectives
- Tell me about a situation where you were under pressure to change your conclusions or recommendations and how you went about arguing your case
- Explain how you would decide which new risk reduction measures you would introduce if resources were limited
- Give an example of an industry event or forum that you have participated in as a risk and safety management professional

In addition to the standardised questions, the Assessor may choose to ask further questions to obtain further evidence or seek clarification. All questions and answers should be recorded by the Assessor. It is recommended that either an audio or video recording is made of the VIVA.