

Smart Awards Level 5 Diploma in Fall Protection System Design - Specification

SMART AWARDS
Awarding Platform for Smart Qualifications

Version Number	Date	Purpose of Change	Classification	Sign Off
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Unit F8A | Holly Farm Business Park | Honiley Road | Kenilworth | CV8 1NP
T: 02476 421125
E: info@smartawards.co.uk
W: www.smartawards.co.uk

Company Number 9079735 | VAT Number 216 7632 08

Introduction

The Smart Awards Level 5 Diploma in Fall Protection System Design is a regulated qualification designed to develop and formally recognise the knowledge, understanding and technical competence required to design, specify and justify fall protection systems.

The qualification is aimed at individuals working within the construction, building safety and work-at-height sectors who are responsible for making design decisions that affect the safe installation, use, inspection and maintenance of fall protection systems.

Learners will develop the ability to apply relevant legislation and technical standards, assess structural and environmental requirements, evaluate system options and produce technically justified design solutions and supporting documentation.

Qualification Objectives

The qualification is designed to enable learners to develop and demonstrate the knowledge and skills required to:

- interpret relevant legislation, standards and technical requirements
- assess work-at-height risks and design requirements
- select and specify appropriate fall protection systems
- apply engineering and design principles
- produce accurate technical designs and supporting documentation
- justify design decisions and communicate technical information effectively.

Qualification Purpose

The purpose of the Smart Awards Level 5 Diploma in Fall Protection System Design is to provide formal recognition of the knowledge, understanding and applied competence required to undertake fall protection system design.

The qualification supports individuals who are responsible for developing safe and technically appropriate design solutions and provides employers with a recognised benchmark of competence for fall protection system designers.

Key Information	
Name	Smart Awards Level 5 Diploma in Fall Protection System Design
Accreditation	This qualification is approved by: • Ofqual: Qualification number: 610/8340/9
Level	5
Guided Learning Hours (Ofqual)	360
Ofqual Total Qualification	600
RQF - Ofqual Credit. Credit value represents the size of a unit which is determined by the learning time. One credit = 10 hours of notional learning.	60
Age	18 and over
Qualification type	Vocationally Related Qualification

Smart awards product area	Construction
Sector subject area	5.2 Building and Construction
Prerequisites and entry requirements	There are no formal entry requirements for this qualification. However, due to the technical complexity and safety-critical nature of fall protection system design, centres must ensure that learners are suitable to undertake the qualification. Learners are expected to have: • English and maths skills at approximately GCSE Grade 4 or equivalent • relevant industry experience or technical knowledge appropriate to fall protection system design. Centres must complete an appropriate initial assessment to identify each learner's suitability and any additional support requirements.
Mandatory units and optional routes to completion.	Learners must successfully complete all 12 mandatory units to achieve the Smart Awards Level 5 Diploma in Fall Protection System Design. There are no optional units or alternative routes to completion. The qualification structure supports progression from underpinning knowledge through to advanced technical application and specialist fall protection system design.
Additional requirements to achieve this qualification.	None
Methods of assessment	The qualification uses a mixed assessment model, combining assessments externally set by Smart Awards with centre-set assessment activities. Smart Awards externally sets the following mandatory assessments: • Unit 1 – Project Management Principles: assignment • Unit 2 – Engineering Principles for Fall Protection System Design: assignment • Synoptic Assessment: a 24-week fall protection system design project, supported by a technical file and professional discussion. The remaining assessment activities are developed and assessed by approved centres against the relevant learning outcomes and assessment criteria. All assessments are marked by the centre and are subject to internal quality assurance and Smart Awards external quality assurance. Assessment guidance, assessor requirements and additional qualification documentation is supplied to approved Smart Awards centres via Quartz.
Grading	Assessment decisions are made against individual assessment criteria and recorded as Met or Not Yet Met. Learners must meet all assessment criteria across all 12 mandatory units to achieve the qualification. Assessment criteria cannot be compensated for by stronger performance elsewhere in the qualification.

Reasonable adjustments and special considerations	Smart Awards approved centres that have learners with specific requirements should refer to the Smart Awards Reasonable Adjustments and Special Considerations Policy and Procedure. This document outlines the support available to ensure fair access to assessments. It can be found on the Smart Awards website at www.smartawards.co.uk
Recognition of Prior Learning	Smart Awards is committed to supporting Recognition of Prior Learning (RPL) and has established a dedicated policy and set of procedures to guide and assist approved centres in its implementation. The full policy is available on the Smart Awards website at www.smartawards.co.uk
Required resources and site requirements for delivering this qualification	Approved centres must have access to appropriate facilities, equipment and resources to support the delivery and assessment of the qualification. Resources must enable learners to undertake relevant research, technical analysis, design development and preparation of technical documentation appropriate to fall protection system design. Where assessment is based on workplace or project information, centres must ensure that the evidence and resources used provide sufficient opportunity for learners to meet the relevant learning outcomes and assessment criteria. All resources used for assessment must reflect current industry practice and support safe and valid assessment.
Assessor and Internal Quality Assurer Requirements	**Assessor Requirements** Assessors must have significant and relevant occupational experience, gained or maintained within the last three years, and sufficient technical knowledge to make valid, reliable and fair assessment decisions at Level 5. Assessors must maintain occupational competence through CPD and participate in standardisation and quality assurance activities. Assessors should hold or are working towards a recognised Level 3 assessor qualification or equivalent. **Internal Quality Assurer (IQA) Requirements** IQAs must have significant and relevant occupational experience, gained or maintained within the last three years, and sufficient technical knowledge to quality assure assessment decisions at Level 5. IQAs must maintain occupational competence through CPD and participate in standardisation and quality assurance activities. IQAs should hold or are working towards a recognised Level 4 IQA qualification or equivalent. All assessors and IQAs must be approved by Smart Awards before undertaking assessment or quality assurance activities. Full requirements are detailed in the Qualification Handbook.

Qualification Structure

The Level 5 Diploma in Fall Protection System Design consists of 12 mandatory units, all of which must be completed to achieve the qualification. Attainment at Level 5 demonstrates the learner's ability to apply specialist knowledge, technical understanding and professional judgement to complex fall protection system design activities, taking responsibility for design decisions and producing safe, technically justified solutions.

Smart Awards Level 5 Diploma in Fall Protection System Design Ofqual: Qualification number: 610/8340/9						
Minimum TQT for this pathway = 600 Minimum number of credits = 60 Minimum number of units = 12		Minimum number of GLH = 360 Other learning time = 240				
Unit Number	Unit Title	Level	M/O	GLH	TQT	CREDITS
A/652/4505	Project Management Principles	5	M	25	40	4
D/652/4506	Engineering Principles for Fall Protection System Design	5	M	40	70	7
F/652/4507	Fundamentals of Fall Protection System Design	5	M	35	60	6
H/652/4508	Designing Safe and Effective Fall Protection Solutions	5	M	35	60	6
J/652/4509	Anchors, PPE Integration and Structural Validation	5	M	50	80	8
M/652/4510	System Assembly, Inspection and Lifecycle Safety	5	M	35	60	6
R/652/4511	Technical Documentation, Configuration and System Layout	5	M	25	40	4
T/652/4512	Specialist Considerations	5	M	25	40	4
Y/652/4513	Rope Access System Design Integration	5	M	25	40	4
A/652/4514	Edge Protection System Design	5	M	20	30	3
D/652/4515	Vertical Fall Arrest System Design	5	M	20	40	4
F/652/4516	Permanent Access Systems – Ladders, Stairs and Walkways	5	M	25	40	4

Learner Support

Centres must ensure that learners receive appropriate support throughout the qualification. This should include an initial assessment of the learner's prior experience, technical knowledge, communication skills and any identified support needs.

Learners should have access to appropriate guidance, learning resources and technical support to enable them to develop the knowledge, skills and professional judgement required at Level 5.

Any additional support provided must not compromise the integrity of the qualification or the learner's requirement to independently demonstrate achievement of the assessment criteria.

Qualification Objectives and Requirements

This qualification confirms that the learner has demonstrated the knowledge, understanding and applied competence required to undertake fall protection system design. To successfully achieve the qualification, learners must demonstrate the knowledge, skills and professional judgement set out within the learning outcomes and assessment criteria across all mandatory units.

Unit Title:	Project Management Principles
Unit Reference:	A/652/4505
Learning outcomes	Assessment criteria
The learner will:	The learner can:
1. Understand the principles and purpose of project management.	1.1 Explain the characteristics of a project and how these differ from routine operations.
	1.2 Analyse the value of structured project management approaches.
	1.3 Explain how organisational strategy influences project selection and prioritisation.
2. Understand project initiation and planning processes.	2.1 Explain the purpose and content of project initiation documentation.
	2.2 Analyse methods for identifying and engaging stakeholders.
	2.3 Explain planning and scheduling techniques used in project design.
	2.4 Evaluate approaches for estimating time, cost and resources.
3. Understand approaches to project risk and quality management.	3.1 Analyse techniques for identifying and evaluating project risks.
	3.2 Explain approaches to developing and monitoring risk responses.
	3.3 Explain methods for maintaining quality throughout the project.
4. Understand methods for monitoring, reporting and controlling project progress.	4.1 Explain performance measurement techniques used in project control.
	4.2 Analyse methods for monitoring deviations from plans.
	4.3 Explain communication requirements for effective project reporting.
5. Understand processes for project closure and review.	5.1 Describe procedures for closing a project.
	5.2 Explain the importance of evaluating project outcomes.
	5.3 Analyse the role of lessons learned in organisational improvement.

Unit Title:	Engineering Principles for Fall Protection System Design
Unit Reference:	D/652/4506
Learning outcomes	Assessment criteria
The learner will:	The learner can:
1 Understand engineering quantities and structural behaviour relevant to fall protection system design.	1.1 Evaluate key engineering quantities in fall protection system design and their influence on system performance, including: – forces – load paths – moments – shear – deflection – stiffness – material properties
	1.2 Analyse structural elements supporting a fall protection system, assessing how geometry, stiffness, support conditions, and material behaviour affect load transfer and reliability.
2 Understand structural mechanics principles to predict system and substrate behaviour under load.	2.1 Apply structural mechanics principles to predict and explain how fall protection components and supporting structures behave under static, dynamic, and multi-directional loading
	2.2 Evaluate how system geometry, anchor positioning, fixing arrangements, and substrate characteristics influence load transfer and performance limits.
3 Understand structural performance risks and failure mechanisms affecting fall protection system installations.	3.1 Evaluate potential failure mechanisms in fall protection systems and determine their impact on design and structural suitability, including: – pull-out – shear – bending – buckling – fatigue and corrosion
	3.2 Analyse structural design factors and site-specific conditions that may significantly affect installation performance and anchorage safety.

Unit Title:	Fundamentals of Fall Protection System Design
Unit Reference:	F/652/4507
Learning outcomes	Assessment criteria
The learner will:	The learner can:
1 Be able to interpret and apply legal, technical and organisational requirements to inform fall protection system design.	1.1 Interpret and apply relevant legislation, legal principles, and regulatory requirements to inform fall protection system design decisions.
	1.2 Analyse project objectives, site constraints, workplace characteristics, and environmental conditions to determine their implications for fall protection system design and overall suitability.
	1.3 Identify the required service life and evaluate environmental and operational factors that must be considered within the fall protection system design.
	1.4 Identify and engage relevant stakeholders to inform and validate fall protection system design requirements.
	1.5 Coordinate and formally document stakeholder interactions to ensure alignment of the fall protection system with technical, operational, and regulatory requirements.
	1.6 Evaluate the initial technical feasibility of proposed fall protection solutions and identify any further validation or design development required.
2 Be able to design fall protection systems that are suitable for specific tasks, working conditions and user competence.	2.1 Work with stakeholders to refine system design, communicate risk assessment outcomes, and ensure requirements for installation, documentation, and use are clearly defined.
	2.2 Assess work methods, task characteristics and user proximity to exposed edges or hazards to establish the fall protection requirements for the task.
	2.3 Determine and justify entry and exit arrangements that support safe access, use, inspection and rescue, including whether these arrangements reduce the need for additional fall protection measures.
	2.4 Evaluate the frequency, nature and duration of work activities to establish the operational requirements that will inform system selection and configuration.
	2.5 Determine the expected number of simultaneous users and ensure the system maintains safe loading margins, component compatibility, and operational efficiency for all intended users.
	2.6 Assess the competence of intended users including selection, inspection, fitting, and use of Personal Fall Protection and design the system to reflect these capabilities, including access, attachment, and movement requirements.

	2.7	Identify foreseeable rescue and evacuation requirements that must be addressed within the fall protection system design.
3 Be able to apply design risk assessment principles to inform and justify fall protection system selection and configuration.	3.1	Apply relevant legislation, technical standards, and organisational procedures throughout all stages of the design risk assessment process.
	3.2	Identify fall-related hazards and assess user-specific factors that influence fall protection system selection, configuration, and performance.
	3.3	Evaluate how construction methods, structural engineering principles, and site conditions affect fall risks and system viability, and use this analysis to inform the design risk assessment.
	3.4	Determine the required fall protection approach based on design risk assessment outcomes, considering compatibility, simplicity and ease of use.
	3.5	Assess risks associated with installation, inspection, use, and maintenance of the fall protection system, and propose proportionate control measures supported by recognised risk assessment models.
4 Be able to apply the hierarchy of control to justify fall protection system design decisions.	4.1	Apply relevant legislation and the hierarchy of control to select appropriate fall protection for the task and environment, prioritising collective protection over personal systems.
	4.2	Evaluate whether collective protection measures can eliminate or reduce fall risk and justify their inclusion or exclusion within the design.
	4.3	Assess the suitability and limitations of personal fall protection systems including anchorage requirements, fall clearance, user competence, and compatibility with the working environment.
	4.4	Where personal fall protection equipment is required, justify its selection with reference to - user competence, - training needs, - foreseeable misuse, - operational constraints and residual - identify any additional controls required.
	4.5	Document and justify the selected fall protection solution, demonstrating compliance with legal duties, industry good practice, and relevant contractual or commercial requirements.

Unit Title:	Designing Safe and Effective Fall Protection Solutions
Unit Reference:	H/652/4508
Learning outcomes	Assessment criteria
The learner will:	The learner can:
1 Be able to specify fall protection solutions that minimise risk while remaining practical, usable and proportionate.	1.1 Use the established design requirements to determine an appropriate fall protection solution and configuration.
	1.2 Select suitable personal fall protection equipment and system components based on task, fall distance, clearance, user capability, and environmental factors.
	1.3 Verify that all components within the fall protection system are compatible and function together safely.
	1.4 Provide clear justification for the selected system using risk assessments, technical reasoning, and relevant standards.
	1.5 Apply design simplification principles to avoid unnecessary system complexity while maintaining safety and compliance.
	1.6 Integrate human factors into system specification, including user competence, ergonomics, foreseeable misuse, and ease of operation.
2 Be able to demonstrate that fall protection solutions provide continuous protection and comply with relevant legal, technical, contractual and commercial requirements.	2.1 Demonstrate how the selected fall protection system has been designed to comply with the Work at Height Regulations and relevant guidance.
	2.2 Evaluate contractual and commercial factors that influence fall protection system design and specification.
	2.3 Demonstrate how the system configuration maintains effective protection during foreseeable access, movement and task activities.
3 Be able to work with manufacturers to confirm and justify technical suitability and system limitations.	3.1 Identify when manufacturer input is required to confirm suitability for specific base materials or applications.
	3.2 Communicate accurate technical information to manufacturers to enable validation.
	3.3 Interpret manufacturer feedback to confirm suitability or identify limitations.
	3.4 Verify that manufacturer guidance is supported by appropriate technical documentation.
	3.5 Integrate validated manufacturer information into the system design and documentation.
4 Be able to determine and justify fall protection system	4.1 Determine system layout and positioning based on hazards, access requirements, task needs and foreseeable user movement.

layout and clearance requirements	4.2	Evaluate hazards and site constraints affecting system and anchor placement and justify how the layout controls fall risk and supports safe use.
	4.3	Select and justify personal fall protection equipment compatible with system layout, user movement, and intended use.
	4.4	Calculate required clearance and free space beneath potential fall paths in accordance with relevant standards and guidance.
	4.5	Adjust system configuration in response to identified risks, constraints, or non-compliance, and justify how the revised design maintains safety and meets legislative and technical requirements.
	4.6	Evaluate how system layout supports safe user behaviour, operational efficiency, inspection, maintenance and ongoing use throughout the system lifecycle.
	4.7	Justify final layout decisions using technical reasoning, risk assessment outcomes, and relevant legislation and standards.

Unit Title:	Anchors, Personal Fall Protection Equipment Integration and Structural Validation
Unit Reference:	J/652/4509
Learning outcomes	Assessment criteria
The learner will:	The learner can:
1 Be able to specify anchorage systems that are compatible with load-bearing structures and verified loading conditions.	1.1 Assess the structural capacity of the base material or element, evaluating load-bearing capability, condition, thickness, edge distances, span, and environmental or installation constraints affecting anchorage suitability.
	1.2 Identify and apply the correct service and design load values for each anchor point, including static and dynamic forces, in line with standards, manufacturer data, and structural principles.
	1.3 Assess base materials, structural capacity, and construction characteristics to confirm compatibility with anchorage requirements and safe system integration.
	1.4 Evaluate how forces such as tension, shear, bending, and compression act on the anchor and supporting structure, and assess how installation choices influence load paths, structural behaviour, and safety margins.
	1.5 Specify anchors and fixings compatible with the substrate, including embedment depth, spacing, finishes, corrosion resistance, and required service life.
	1.6 Confirm that proposed installation locations do not exceed structural limitations and adapt anchor layout where conflicts or constraints are identified.
	1.7 Recognise when specialist validation or structural engineering input is required and obtain appropriate verification.
2 Be able to arrange, interpret and justify responses to structural anchor testing outcomes.	2.1 Identify conditions that necessitate trial testing, including unusual substrates, uncertain base material properties, marginal capacities, or site conditions requiring verification.
	2.2 Specify, arrange and oversee anchor testing in accordance with manufacturer instructions, relevant standards, and approved procedures.
	2.3 Determine and justify representative test locations that accurately represent final installation conditions without compromising the integrity of the installed system.
	2.4 Analyse test results to confirm whether anchors meet structural and performance requirements.
	2.5 Apply structural principles to interpret test behaviour and identify factors influencing anchor safety and reliability.

	2.6	Revise system design based on test outcomes and document validation decisions.
3 Be able to design anchorage systems that are compatible with specified personal fall protection equipment.	3.1	Confirm the specified personal fall protection equipment prior to anchor system design.
	3.2	Verify compatibility between the selected personal fall protection equipment and the anchor system under intended use conditions.
	3.3	Design anchor layouts that safely accommodate personal fall protection equipment loading, movement, and attachment requirements.
	3.4	Assess base material characteristics specifically in relation to personal fall protection equipment loading, movement and anchor interaction.
	3.5	Apply construction methods and structural engineering principles to integrate the fall protection system effectively within the built environment.
4 Be able to obtain, interpret and apply appropriate structural verification for anchorage systems.	4.1	Identify structural elements supporting anchor loads and determine transferred load magnitudes.
	4.2	Assess personal competence limits and identify when structural verification is required.
	4.3	Engage appropriately qualified professionals to verify structural adequacy.
	4.4	Provide sufficient technical information to support verification.
	4.5	Interpret verification outcomes and apply findings to the anchor design.
5 Be able to establish, manage and justify system rating limits for anchorage systems.	5.1	Determine the required system rating based on use conditions.
	5.2	Identify maximum allowable system ratings from verified documentation.
	5.3	Confirm compatibility between required and allowable system ratings.
	5.4	Evaluate structural factors influencing system rating capacity.
	5.5	Consult with duty holders to communicate limitations and propose compliant alternatives.

Unit Title:	System Assembly, Inspection and Lifecycle Safety
Unit Reference:	M/652/4510
Learning outcomes	Assessment criteria
The learner will:	The learner can:
1 Be able to design fall protection systems that can be safely assembled and used in accordance with intended application and manufacturer instructions.	1.1 Interpret the functional and operational requirements of the fall protection system to inform appropriate system design.
	1.2 Select components that are compatible, compliant, certified, and suitable for assembly in accordance with manufacturer guidance.
	1.3 Ensure the system design meets relevant technical standards, legal duties, and intended load and use conditions.
	1.4 Demonstrate structural understanding by explaining how structural design principles apply to the proposed installation and analysing critical factors that affect performance.
	1.5 Confirm that installation and assembly methods can be carried out safely on site in line with manufacturer instructions and site constraints.
	1.6 Demonstrate that the system remains safe and poses no undue health risks during use, inspection, and maintenance.
2 Be able to design fall protection systems that allow for effective inspection throughout their service life.	2.1 Design the fall protection system to provide safe physical access for inspection of exposed components throughout its service life.
	2.2 Incorporate design features that enable inspection or monitoring of concealed or partially hidden elements.
	2.3 Specify materials, finishes and installation methods that support long-term structural integrity and inspectability.
	2.4 Determine and justify the required service life of the system, considering environmental conditions, duty holder needs and usage expectations.
	2.5 Identify environmental and climatic factors that may affect system performance and integrate appropriate mitigation measures.
3 Be able to develop and justify examination schemes that support ongoing safe use and maintenance of fall protection systems.	3.1 Identify applicable standards, manufacturer instructions and regulatory requirements that define inspection and examination obligations.
	3.2 Define the scope of inspection by identifying all system components and interfaces requiring examination.
	3.3 Determine and justify inspection types, intervals and triggers appropriate to system use and environment.
	3.4 Specify inspection methods, acceptance criteria and examination techniques aligned with system risk and manufacturer guidance.

	3.5	Justify how the inspection regime supports ongoing system reliability and safe use.
4 Be able to provide duty holders with clear, accurate and justified usage, safety and decommissioning information.	4.1	Specify the intended use, operational limits, and performance conditions for which the fall protection system has been designed and tested.
	4.2	Identify structural design constraints, critical load factors, and substrate conditions that must be observed to maintain system integrity and safety.
	4.3	Define and communicate conditions, restrictions, maintenance requirements, dismantling requirements and disposal considerations to preserve safe use and lifecycle integrity.

Unit Title:	Technical Documentation, Configuration and System Layout
Unit Reference:	R/652/4511
Learning outcomes	Assessment criteria
The learner will:	The learner can:
1 Be able to review the completed technical file to confirm accuracy, consistency, traceability and suitability for installation, inspection, use and maintenance.	1.1 Record project identification details and design references to ensure traceability of system design decisions.
	1.2 Record the complete fall protection system layout, including system types, quantities, locations, assembly details, intended personal fall protection equipment and overall access strategy.
	1.3 Provide detailed fixing and structural anchor connection information, including substrate requirements, installation criteria, load considerations, and compatibility with selected personal fall protection equipment.
	1.4 Produce a bill of materials that reflects system design requirements, compatibility and specified performance characteristics
	1.5 Define provisions for safe inspection of exposed and concealed components while maintaining long-term system integrity.
	1.6 Compile all supporting documentation within the system technical file.
	1.7 Document design decisions, legal considerations, structural assessments, commercial factors, and supporting evidence to produce a clear and auditable specification.
	1.8 Provide risk assessments and design-led method statements covering installation, inspection and maintenance of the fall protection system.
2 Be able to prepare, issue and control technical documentation supporting installation, inspection and handover.	2.1 Supply the installer with the complete system design specification and all supporting technical information.
	2.2 Define and control installation sign-off documentation requirements.
	2.3 Define inspection sign-off documentation required prior to first use.
	2.4 Prepare and issue formal handover documentation to the duty holder.
	2.5 Specify documentation return, retention and incorporation requirements within the system technical file.
3 Be able to define and document system	3.1 Document all design assumptions, constraints, and conditions that influence system performance and safe use.

limitations, assumptions and safe use requirements	3.2 Define system limitations, including structural constraints, load limits, environmental restrictions, and operational boundaries.
	3.3 Specify user requirements, including competence, training, supervision, and behavioural expectations necessary for safe system use.
	3.4 Document residual risks and define required control measures to support safe installation, use, inspection, and maintenance.
	3.5 Define inspection, maintenance, and lifecycle requirements that must be followed to maintain system safety and compliance.
	3.6 Present system limitations, assumptions, and safety information clearly within the technical file to support duty holder understanding and safe system management.

Unit Title:	Specialist Considerations
Unit Reference:	T/652/4512
Learning outcomes	Assessment criteria
The learner will:	The learner can:
1 Be able to determine, validate and justify free fall clearance requirements for fall protection systems.	1.1 Determine the required obstacle-free clearance zone based on task geometry, system layout, and user trajectory.
	1.2 Establish additional clearance required to accommodate deformation or deflection of anchors, connectors, and system components.
	1.3 Validate that the available free space is sufficient under worst-case loading conditions.
	1.4 Adjust system layout or component selection where required clearance cannot be achieved.
	1.5 Document all clearance calculations, assumptions, and justifications within the system design documentation.
2 Be able to design fall protection systems that support effective emergency and rescue arrangements.	2.1 Assess foreseeable emergency and rescue scenarios relevant to the fall protection system, task type, user location, and site risks.
	2.2 Specify suitable rescue and recovery techniques and equipment appropriate to the identified scenarios and system configuration.
	2.3 Define how rescue planning integrates with training, competence requirements, and organisational procedures.
	2.4 Specify rescue and recovery arrangements that require formal adoption by the duty holder.
	2.5 Define review and update requirements for rescue and recovery arrangements.
3 Be able to analyse, interpret and apply relevant British and European standards to fall protection system design.	3.1 Identify applicable British and European standards, directives, manufacturer limitations, and industry guidance relevant to the fall protection system.
	3.2 Interpret technical, legal, and manufacturer requirements and assess their influence on system design and configuration.
	3.3 Apply standards, directives, and manufacturer limitations to design, installation, configuration, and inspection arrangements.
	3.4 Evaluate overall system compliance and verify that all components remain within permitted limits.
	3.5 Document all standards, directives, limitations, and compliance decisions within the system technical file.
4 Be able to specify and justify appropriate marking, signage and labelling	4.1 Identify marking, signage, and labelling requirements relevant to the fall protection system and its intended use.
	4.2 Interpret standards, legal duties, and manufacturer instructions relating to marking and labelling.

requirements for fall protection systems.	4.3	Specify the type, content, location, and durability of markings and signage.
	4.4	Ensure markings and labels are permanent, legible, and suitable for the environment.
	4.5	Justify marking and signage in relation to safety, inspection, maintenance, and compliance.
	4.6	Plan and incorporate marking, signage and labelling requirements as part of the overall system design.

Unit Title:	Rope Access System Design Integration
Unit Reference:	TBC
Learning outcomes	Assessment criteria
The learner will:	The learner can:
1 Be able to interpret and apply rope access principles, limitations and competence requirements to fall protection system design.	1.1 Recognise the limits of personal competence in rope access system design and identify when specialist validation or expert input is required.
	1.2 Apply core rope access principles to inform safe system configuration and anchor positioning.
2 Be able to evaluate rope access equipment characteristics and justify their influence on anchor and system design.	2.1 Analyse the operation, performance characteristics, and limitations of rope access equipment used in fall protection systems.
	2.2 Assess how rope access equipment behaviour influences anchor layout, load paths, and structural capacity requirements.
3 Be able to design and justify rope access anchor layouts that support safe operation, rescue and inspection.	3.1 Analyse rope access anchor layouts and configurations to ensure structural suitability, correct load transfer, and operational safety.
	3.2 Evaluate rescue requirements and their implications for anchor redundancy, spacing, and access/egress arrangements.
	3.3 Assess inspection and access requirements arising from the system design and integrate these into the anchor layout.
4 Be able to evaluate and justify environmental and building interaction factors affecting rope access system behaviour.	4.1 Assess environmental, ergonomic, and building-envelope factors that influence rope access system design.
	4.2 Evaluate how rope access activity may affect adjacent building elements and specify appropriate mitigation measures.

Unit Title:	Edge Protection System Design
Unit Reference:	A/652/4514
Learning outcomes	Assessment criteria
The learner will:	The learner can:
1 Be able to interpret and apply legal and technical standards governing permanent and temporary edge protection systems.	1.1 Interpret and apply the requirements of Building Regulations 2010 Part K in relation to guarding, protection from falling, and safe access.
	1.2 Interpret and apply the requirements of BS EN 14122-3 and BS 6180 when selecting and using permanent guardrails, barriers, and safe access systems.
	1.3 Interpret and apply the specification and performance requirements of BS 13700 and BS EN 13374 when selecting and using permanent and temporary edge protection systems.
2 Be able to assess site-specific risks and access requirements to select and justify appropriate edge protection solutions.	2.1 Assess site-specific risks, user access routes, and task requirements to determine where edge protection is required to support safe access and egress.
	2.2 Select and justify a suitable permanent or temporary guardrail system based on site constraints, intended use, user movement, and required performance ratings.
	2.3 Evaluate compatibility between the proposed guardrail system, fixings, base materials, and supporting structure to ensure stability, load transfer, and long-term performance.
3 Be able to configure, verify and justify edge protection systems to ensure compliance and safe use.	3.1 Configure guardrail layout, spacing, fixing arrangements, and component interfaces to meet required loading performance and safe use conditions.
	3.2 Verify through design review that the final guardrail configuration complies with manufacturer specifications, technical standards and legal requirements.
	3.3 Document the edge protection system design within the system technical file, including justification for system selection, load considerations, installation requirements, and inspection and maintenance provisions.

Unit Title:	Vertical Fall Arrest System Design
Unit Reference:	D/652/4515
Learning outcomes	Assessment criteria
The learner will:	The learner can:
1 Be able to evaluate ladder access risks and structural suitability to inform and justify vertical fall arrest system design.	1.1 Evaluate the risks associated with fixed vertical ladder access, considering user capability, task demands, environmental conditions, and access arrangements.
	1.2 Assess ladder height, geometry, obstructions, transition points, and the limitations of hoops or cages when determining system design requirements.
	1.3 Assess the suitability of ladder construction and supporting substrates to withstand the dynamic loads generated by a vertical fall arrest system.
	1.4 Evaluate environmental influences, including wind loading, corrosion exposure, temperature variation, and confined-space conditions, that may affect structural performance or system behaviour.
2 Be able to select, configure and justify vertical fall arrest systems aligned with user, environmental and rescue requirements.	2.1 Evaluate different vertical fall arrest system types, analysing their performance characteristics, limitations, and environmental suitability.
	2.2 Assess the interaction between the vertical fall arrest system and ladder geometry, safety cages, roof hatches, and transition points.
	2.3 Design a vertical fall arrest system configuration that aligns with user competence, site conditions, environmental loading, and structural characteristics.
	2.4 Integrate rescue requirements into the system design, ensuring predictable fall paths, adequate clearance, and feasible recovery arrangements.
3 Be able to define and justify competence, training and documentation requirements for vertical fall arrest systems.	3.1 Determine training, competence, and safe-use requirements associated with the selected vertical fall arrest system.
	3.2 Specify pre-use, inspection, and maintenance requirements aligned with manufacturer instructions and relevant standards.
	3.3 Specify the content, scope and purpose of installation, inspection and handover documentation required to support commissioning and ongoing use.

Unit Title:	Permanent Access Systems – Ladders, Stairs and Walkways
Unit Reference:	F/652/4516
Learning outcomes	Assessment criteria
The learner will:	The learner can:
1 Be able to interpret and apply statutory and standards-based requirements for permanent access and egress systems.	1.1 Interpret and apply the requirements of BS EN ISO 14122 to the design and evaluation of permanent access and egress systems.
	1.2 Interpret and apply the dimensional, performance and installation requirements of BS 4211 to inform permanent ladder design and specification.
	1.3 Apply the hierarchy of permanent access solutions to determine appropriate access types for different locations and tasks.
2 Be able to evaluate hazards and structural requirements associated with permanent access systems and justify design decisions.	2.1 Analyse hazards associated with ladders, stairs, step ladders, and working platforms to determine required control measures.
	2.2 Analyse the critical dimensional, load, and structural requirements governing permanent access system design.
	2.3 Determine when guarding, edge protection, or fall protection must supplement permanent access systems.
3 Be able to define and justify inspection, maintenance and testing requirements for permanent access systems.	3.1 Determine inspection and maintenance requirements based on applicable standards, manufacturer instructions, and design assumptions.
	3.2 Specify how inspection findings, maintenance actions and system limitations must be recorded and communicated to support continued safe use.