SIAS Qualification Specification

SIAS Level 2 Award in the Introduction to Hydrogen Transportation and Distribution

Qualification Number: 610/6303/4

Operational Start Date: 1st September 2025

Contents

Version History

This is a live document and as such will be updated when required. It is the responsibility of the approved centre to ensure the most up-to-date version of the Qualification Specification is in use.

Version	Date	Comments
1.0	01/09/2025	First Published

Introduction

Welcome to SIAS

SIAS is an Awarding Organisation regulated in England by the Office of Qualifications and Examinations Regulation (Ofqual) and in Northern Ireland by the Council for Curriculum, Examination and Assessment Regulation (CCEA Regulation).

We exist to drive positive change, and across STEM industries globally, we empower learners to achieve their full potential.

As the leading Awarding Organisation for the technical science, manufacturing, engineering and low carbon sectors, we are disrupting through innovative and collaborative approaches.

Our mission is to deliver transformational experiences and solutions that support the skills agenda.

Feedback

Customer experience and feedback is very important to us. We're always open to suggestions when it comes to enhancing and improving our services. If you have any comments or feedback on our services or products, please contact our team at info@siasuk.com or call us on 01925 515211.

About this Specification

This document has been developed to provide information for learners and centres undertaking, delivering or quality assuring this qualification.

Centre Recognition and Qualification Approval

To deliver this qualification, the centre must be recognised by SIAS.

Recognised centres must apply for approval for each qualification they intend to offer. Qualification approval must be obtained prior to conducting any learner assessments.

For details of our centre recognition and qualification approval process, visit our website or contact us at info@siasuk.com.

About this Qualification

Key Facts

Qualification Title	SIAS Level 2 Award in the Introduction to Hydrogen Transportation and Distribution
Qualification Number	610/6303/4
Guided Learning Hours (GLH)	18
Total Qualification Time (TQT)	24
Assessment Methods	Multiple-Choice Question Examination
Operational Start Date	1st September 2025
Review Date	31st August 2028
Operational End Date	-
Certification End Date	-
Regulation	This qualification is regulated by Ofqual

Qualification Objective

The SIAS Level 2 Award in the Introduction to Hydrogen Transportation and Distribution aims to provide learners with the knowledge and understanding required to support the safe, legal, and effective transportation and handling of hydrogen. It introduces learners to hydrogen forms and transport methods, the associated risks and safety requirements, as well as the equipment, documentation, and regulatory standards involved. Learners will develop awareness of load security, safe driving practices, emergency response, and communication protocols necessary to operate safely and responsibly within hydrogen transport environments. This qualification is suitable for individuals entering or working in hydrogen logistics, operations, or support roles where safety and regulatory compliance are essential.

Entry Requirements

This qualification is available for learners aged 16+.

Learners must have achieved the SIAS Level 2 Award in the Introduction to Hydrogen Safety or an equivalent qualification prior to enrolling.

Centres should take reasonable steps to ensure learners are able to complete this qualification, for example by carrying out an initial assessment to confirm they can work at the appropriate level.

Recognition of Prior Learning

Recognition of Prior Learning (RPL) is the process of recognising previous, informal or experiential learning which could contribute to a qualification or unit. SIAS supports the use of RPL, and centres must work to the principles included in the SIAS RPL Policy which is available on the SIAS website. This policy should be reviewed alongside this guide and all other relevant SIAS qualification documentation.

Qualification Structure

To be awarded the SIAS Level 2 Award in the Introduction to Hydrogen Transportation and Distribution learners must achieve the following.

- All mandatory units listed in the table below.

Ofqual Unit reference	Unit title	Level	GLH	TQT
M/651/7636	Unit 1: Safe Transport and Handling of Hydrogen	2	7	9
R/651/7637	Unit 2: Safe Driving and Load Security in Hydrogen Transport	2	6	8
T/651/7638	Unit 3: Hazard Response and Emergency Procedures in Hydrogen Transport	2	5	7
TOTAL			**18**	**24**

Total Qualification Time (TQT) and Guided Learning Hours (GLH)

Note: Values for Total Qualification Time, including Guided Learning Hours, are calculated by considering the different activities that learners would typically complete to achieve and demonstrate the learning outcomes of a qualification. They do not include activities which are required by a learner's teacher based on the requirements of an individual learner and/or cohort. Individual learners' requirements and individual teaching styles mean there will be variation in the actual time taken to complete a qualification. Values for Total Qualification Time, including Guided Learning, are estimates.

Some examples of activities which can contribute to Total Qualification Time include:

- independent and unsupervised research/learning
- unsupervised compilation of a portfolio of work experience
- unsupervised e-learning
- unsupervised e-assessment practice
- unsupervised coursework
- watching a pre-recorded podcast or webinar
- unsupervised work-based learning
- all Guided Learning.

Some examples of activities which can contribute to Guided Learning include:

- classroom-based learning supervised by a teacher
- work-based learning supervised by a teacher
- live webinar or telephone tutorial with a teacher in real time
- e-learning supervised by a teacher in real time

- all forms of assessment which take place under the immediate guidance or supervision of a lecturer, supervisor, tutor or other appropriate provider of education or training, including where the assessment is competence-based and may be turned into a learning opportunity.

Grading

This qualification is graded as a pass/fail.

Delivery and Assessment

Geographical Coverage

This qualification is regulated in England.

Use of Language

All learners must be assessed in English unless the qualification specification states that another language will be accepted.

Progression Opportunities

Upon successfully completing this qualification, learners may wish to progress into further development and training in hydrogen technologies and safety.

Assessment Guidance

All SIAS assessments will be accessible and produce results that are valid, reliable, transparent and fair.

The SIAS Level 2 Award in the Introduction to Hydrogen Transportation and Distribution contains 3 mandatory knowledge units.

Unit No.	Unit title
1	Safe Transport and Handling of Hydrogen
2	Safe Driving and Load Security in Hydrogen Transport
3	Hazard Response and Emergency Procedures in Hydrogen Transport

To achieve the qualification, learners must successfully pass one externally set and marked Multiple Choice Question (MCQ) examination covering the 3 mandatory units as detailed in the below table:

Component	Set by	Marked by	Assessment Method	Pass Requirement	Grading
Unit 1	SIAS	SIAS	14 MCQs	Minimum 8/14 correct	Pass/Fail
Unit 2	SIAS	SIAS	7 MCQs	Minimum 4/7 correct	Pass/Fail

Unit 3	SIAS	SIAS	9 MCQs	Minimum 6/9 correct	Pass/Fail
Overall Award	**SIAS**	**SIAS**	**One MCQ examination** (30 questions across all units)	All units must be passed **and** a minimum of 21/30 overall	**Pass/Fail**

Time Allowed: Learners have 50 minutes in total to complete the examination.

The examination is available online through the SIAS secure XAMS platform. The examination can also be paper based. For any queries, please contact us at info@siasuk.com.

The assessment must be undertaken in controlled conditions. This means:

- learners must complete the assessment unaided
- books and other training aids must not be accessed by the learners.
- all assessments must be invigilated to maintain authenticity and security.

All assessment results will be subject to moderation and monitoring by SIAS to ensure standards are maintained and outcomes remain fair and consistent.

Centres should have systems in place to verify a learner is ready to undertake their assessment.

Centres must ensure that no part of the assessment process, including invigilation or internal quality assurance is conducted by anyone with a personal interest in the assessment outcome.

Learners who do not achieve a pass will be permitted to retake the assessment up to two times. A resit may only be undertaken for an assessment that has previously been failed.

Documentation to support the qualification assessment process can be accessed from the SIAS Pinacle system.

ID requirements

It is the responsibility of the centre to have systems in place to ensure that the person taking an assessment is the person they are claiming to be. All centres are therefore required to ensure that each learner's identification is checked before they undertake the assessment.

SIAS recommends the following as proof of a learner's identity:

- a valid passport (any nationality)
- a photocard driving licence
- another photographic ID card, e.g. employee ID card, student ID card, travel card etc.

Centre Requirements

All SIAS centres must be approved by SIAS to deliver the qualification(s) they wish to offer. This is to ensure centres have the processes and resources in place to deliver the qualification(s). Further information can be found in the SIAS Centre Handbook.

When a centre applies to offer a qualification, they will need to provide evidence that they have sufficient resources and infrastructure in place for delivery of that qualification:

- evidence of staff competence and knowledge
- details of available resources.

Information regarding the induction and continuing professional development must be made available to SIAS by centres through the external quality assurance process.

Tutor/Trainer Requirements

For the SIAS Level 2 Award in the Introduction to Hydrogen Transportation and Distribution, tutors/trainers are required to demonstrate they:

- have relevant occupational knowledge and competence
- hold a recognised education and training qualification or equivalent training experience
- have completed recent, relevant CPD activities for the subject area.

Evidence includes:

- CV and relevant occupational qualifications and experience.
- Up-to-date CPD Record including certification from any courses attended.

SIAS recommends that as best practice for tutors/trainers to hold or be working towards a relevant education and training qualification. These include:

- Level 3 Award in Education and Training or equivalent including Preparing to Teach in the Lifelong Sector (PTLLS), CertEd/PGCE, L4 Certificate in Education and Training, L5 Diploma in Education and Training.

Where this is not the case, SIAS will look at alternative sources of evidence for training competence, such as professional qualifications, relevant work experience or internal training records. For further guidance, please contact us.

Continuing Professional Development (CPD)

Centres are expected to support their staff, ensuring that their subject knowledge remains current and is up to date with best practice in delivery, assessment and quality assurance.

Quality Assurance Guidance

All SIAS qualifications require centres to have in place a robust mechanism for the quality assurance of training delivery and invigilated assessment arrangements.

External Quality Assurance

External quality assurance will be undertaken by SIAS. Centres will be required to provide documentation and other evidence to support this process upon request. Please refer to our Centre Handbook for further details.

Equality and Diversity

Delivery of SIAS qualifications must comply with equality and diversity legislation. Learners should not experience any barriers to achievement in respect of:

- Age
- Disability
- Gender
- Gender reassignment
- Marriage and civil partnerships
- Pregnancy and maternity
- Race
- Religion and belief
- Sexual orientation.

Reasonable Adjustments

All learners must be treated fairly and equally and be provided with every opportunity to achieve our qualification(s). For more information or guidance, please refer to the SIAS Reasonable Adjustments Policy available on our website.

Health and Safety

SIAS are committed to ensuring the safety and wellbeing of learners. Due to the nature of some of the sectors SIAS work in, there can be a high level of risk which we expect centres to manage effectively. Centres must take appropriate measures to assess and manage these risks and implement procedures so that qualifications are delivered safely, minimizing risks to learners and those involved in the assessment process as much as possible. Working environments must comply with all required health and safety standards.

Qualification Content

Unit 1: Safe Transport and Handling of Hydrogen

Unit Reference	M/651/7636
Level	2
GLH	7
Aim	The aim of this unit is to provide learners with foundational knowledge of how hydrogen products are transported and distributed, including the main transport methods, associated equipment, and necessary documentation associated in compliance with safety, legal, and organisational standards.
Assessment Methodology	Multiple-choice examination

Learning Outcomes *The learner will:*	**Assessment Criteria** *The learner can:*	
1. Understand hydrogen transportation and distribution processes.	1.1	Identify the different forms of hydrogen used in hydrogen transportation.
	1.2	List the primary methods used for transporting hydrogen.
	1.3	Identify the key equipment and infrastructure involved in hydrogen transportation and distribution systems.
2. Understand the documentation requirements for safely transporting hydrogen.	2.1	Identify the legal and industry-standard documents required for hydrogen transportation, including regulations and guidelines for safe driving of road tankers.
	2.2	Recognise key procedures for completing and recording hydrogen transportation documentation.
3. Understand the health and safety risks of transporting hydrogen and how these are managed.	3.1	Identify hazards and risks associated with hydrogen products.
	3.2	Identify the hazards and associated risks involved in transporting hydrogen.
	3.3	Identify control measures used to mitigate hazards and risks in hydrogen transport.
	3.4	Recognise PPE and safe handling techniques used during hydrogen transport.

	3.5	Identify why hydrogen products must be properly handled and secured during transport.
	3.6	Identify the purpose of placarding and marking when transporting hydrogen products.
4. Understand the regulations and behaviours required for safe and legal hydrogen transport by road.	4.1	Identify safe driving behaviours required for transporting hydrogen products in accordance with legal and organisational requirements.
	4.2	Identify legal requirements for driver hours and tachograph use.
	4.3	Recognise signs of driver fatigue and actions to take to maintain safety during hydrogen transport.

Unit 2: Safe Driving and Load Security in Hydrogen Transport

Unit Reference	R/651/7637
Level	2
GLH	6
Aim	The aim of this unit is to provide learners with the knowledge required to maintain safe driving practices, conduct vehicle and equipment checks, secure hydrogen loads, and monitor conditions during transit in line with organisational and legal requirements.
Assessment Methodology	Multiple-choice examination

Learning Outcomes *The learner will:*	**Assessment Criteria** *The learner can:*	
1. Understand safe vehicle preparation and maintenance practices for transporting hydrogen.	1.1	Recognise the importance of maintaining a clean and tidy vehicle.
	1.2	Identify vehicle and equipment checks required to ensure hydrogen load security and safe driving.
	1.3	Identify procedures for reporting tanker and equipment defects that could affect safe transport.
2. Know how to secure hydrogen loads safely for different forms of hydrogen.	2.1	Identify correct loading and securing methods for the safe transport of different forms of hydrogen.
3. Understand how to monitor hydrogen loads during transit.	3.1	Identify procedures for monitoring hydrogen loads in transit.
	3.2	Recognise appropriate actions to take in response to incidents or abnormal conditions during hydrogen transport.

Unit 3: Hazard Response and Emergency Procedures in Hydrogen Transport

Unit Reference	T/651/7638
Level	2
GLH	5
Aim	The aim of this unit is to provide learners with the knowledge required to identify potential hazards, respond effectively in emergency situations, follow escalation and reporting procedures, and communicate appropriately with key personnel during the transportation of hydrogen.
Assessment Methodology	Multiple-choice examination

Learning Outcomes *The learner will:*	**Assessment Criteria** *The learner can:*	
1. Understand how to respond safely to hydrogen transport incidents.	1.1	Identify common types of incidents that may occur during hydrogen transport.
	1.2	Identify emergency response procedures for hydrogen transport incidents.
2. Know emergency communication and escalation procedures for incidents and defects during hydrogen transport operations.	2.1	Identify how to contact emergency services.
	2.2	Recognise internal escalation and response procedures.
	2.3	Recognise when incidents or defects must be reported during hydrogen transport.
3. Know how to communicate effectively in the transport process.	3.1	Identify the main stakeholders involved in the transport of hydrogen.
	3.2	Recognise appropriate methods of communicating with others involved in the hydrogen transport chain.

Resources

SIAS provides the following additional resources for this qualification:

- Centre Qualification Guide
- Qualification Learner Logbook
- Externally Set Assessments.

Appendix 1: Specimen Assessment

Specification for the SIAS-set, SIAS-marked Multiple Choice Question Examination.

Number of Questions	**30 questions covering 3 mandatory units.** Unit 1: 14 questions Unit 2: 7 questions Unit 3: 9 questions
Time Allowed	50 minutes
Pass Criteria	Unit 1: A minimum of 8 correct out of 14 Unit 2: A minimum of 4 correct out of 7 Unit 3: A minimum of 6 correct out of 9 **Overall pass mark: 21 out of 30**
Grading	Pass or Fail

Sample questions:

Sample Question 1
What type of compressor is commonly used in hydrogen distribution systems to increase pressure for storage or transport?
A. Rotary screw compressor
B. Scroll compressor
C. Reciprocating compressor
D. Diaphragm compressor

Sample Question 2
Which of the following control measures helps to reduce the risk of hydrogen ignition during road transport?
A. Using standard vehicle lighting systems for visibility.
B. Ensuring all electrical components are intrinsically safe.
C. Installing passive ventilation systems in cargo areas.
D. Equipping the vehicle with temperature-controlled storage units.

Further Information

For information about SIAS and general enquiries please see our website: www.siasuk.com or contact:

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