



# National Highways Sector Schemes for Quality Management in Highway Works

22

For the Management, Operation, Installation and  
Maintenance of Road Tunnels

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# DOCUMENT CONTROL

## Issue Statement

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# Composition of the Sector Scheme Advisory Committee, Exclusion of Liability and Selection of Certification Body

## Composition of The Sector Scheme Advisory Committee

Association of Signals, Lighting and other highway Electrical Contractors	(ASLEC)
Certification Bodies (See list in Appendix F)	(CB)
Highways Agency	(HA)
Highways Term Maintenance Association	(HTMA)
Road Tunnel Operators Association	(RTOA)
Welsh Assembly Government	(WAG)

The following organizations have been sent a copy of this document

British Tunnelling Society	(BTS)
Civil Engineering Contractors Association	(CECA)
Department of Regional Development (Northern Ireland)	(DRD(NI))
Highways and Construction Training Association	(HCTA)
Major Contractors Group	(MCG)
SCOTS	
Scottish Government	
Technical Advisory Group	
UKAS	
County Surveyors Society	(CSS)
Department of Transport	(DFT)
Transport for London	(TFL)
NSAI Certification Body	
SURVIVE	
TLC	

## Exclusion of Liability

### The Advisory Committee:

- (i) have and accept no liability whatsoever for any failure of any system or systems assessed under this Sector Scheme Document or for the quality, fitness for purpose, or safety of any product or service which is subject of such assessment;
- (ii) do not provide any representation as to any aspect of any such system, product or service, and,
- (iii) hereby expressly exclude all and any liability or responsibility (however alleged to arise) for or in connection with the provision of any service or product or any use of any product, all and such liability or responsibility attaching exclusively to the producer (or user as the case maybe) thereof.

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## Selection of Certification Body

It is important to note that due to the specific requirements for assessor competence required by this Sector Scheme a technical expert may be appointed by the Sector Scheme Advisory Committee to assist UKAS in the assessment of Certification Bodies as described in Appendix G.

Prospective companies seeking registration under this scheme shall ensure that they engage a certification body specifically accredited to assess against the requirements of this Sector Scheme Document. Managers, Operators, Maintainers, specifiers, consultants, engineers etc. that require confirmation of compliance with the contract specification in respect of the supply of products/materials shall confirm the current status of the quality management system certificate issuer and that specific reference is made to this Sector Scheme (see Appendix F).

Certification Bodies may be accredited for specific scopes to this scheme. In general the scopes shall align with the list given in section 1 and Appendices F of this document, where other areas of activity are found, these shall be reported to UKAS for inclusion within the scope of the document and appendices G and K.

## Implementation

This scheme is an entirely new National Highway Sector Scheme and introduces requirements for the management, operation, installation and maintenance of road tunnels.

The Sector Scheme Advisory committee has agreed with relevant trade associations and Certification Bodies that an introductory period for implementing this scheme is appropriate and has concluded that this period will operate until 1<sup>st</sup> May 2010. Following expiry of this introduction period and where required in a contract, Organizations will be required to be registered to the Scheme by a relevant UKAS accredited CB. The date will also be promulgated by the relevant trade associations and by CBs to their members and relevant clients respectively. In addition, the Scheme will be listed in Appendix A of the Specification for Highway Works as a mandatory requirement for suppliers contracted to the Highways Agency after the publication date by UKAS.

CBs will be able to issue certificates of registration from 1<sup>st</sup> November 2008. It would be advisable for Organizations to contact their CB to confirm that the CB is intending to achieve accreditation for this Sector scheme and establish the route for registration.

With respect to initial implementation of this Sector Scheme Organizations may seek registration by a two stage process. The Organization can request validation of their Quality Management System against this

Sector Scheme for initial registration. Within twelve months of this initial registration Organizations must seek verification of their processes to obtain full registration. That is, the initial auditing will be to validate that the quality management system is in place, and then subsequent auditing will be carried out to verify that the system is in operation. For full registration Organizations will therefore have to demonstrate that they have been audited for office based and site based activities. These interim arrangements will be available until 1<sup>st</sup> May 2010.

Training and competency requirements for this sector scheme are being developed by the Sector scheme advisory Committee as discussed in Appendix C of this SSD. The details of the requirements are to be identified and included in subsequent issues of the SSD.

## Introduction

1. National Highway Sector Schemes (NHSS) are bespoke quality management schemes that have been developed, as a partnership, by all sides of the highway industry to interpret BS EN ISO9001:2000 as it applies to a particular highway activity/industry within the United Kingdom.
2. National Highway Sector Schemes are designed to:
  - Provide an industry benchmark
  - Ensure that all processes are planned
  - Provide a basis for continuous improvement
  - Focus on Quality as an objective
  - Reduce costs for client and contractor
  - Provide and maintain a properly trained and competent workforce
  - Involve all sides of industry in scheme ownership within a partnership framework
  - Ensure that certification Bodies use auditors with technical knowledge and experience of the sector concerned
  - Promote confidence in quality management systems by provision of a robust transparent system.
3. Separate technical advisory committees for each activity within the sector scheme provide advice to UKAS and expert representation is drawn from all sides of industry. Each sector scheme technical advisory committee interprets BS EN ISO9001:2000 in relation to the requirements of their particular activity and comes to a consensus on the minimum levels of workmanship, services, products, testing and the training and competency of operatives needed to meet specification requirements as well as auditor qualification and requirements in respect of EMS and other management systems. The details are contained in the individual Sector Scheme Documents (SSD).
4. The individual technical advisory committees are overseen by the Highways Sector Scheme Liaison Group. This group provides a forum for discussion on the effectiveness of the Sector schemes and co-ordinates developments so that they can be uniformly taken forward by each of the technical advisory committees. It is also the venue where dialogue with UKAS and the certification bodies on the application of the schemes takes place.
5. This SSD relates to the quality management system requirements for management, operation, installation and maintenance of road tunnels. It sets out to identify a common interpretation of BS EN ISO 9001:2000 for Organizations and Certification Bodies engaged in the Sector.
6. The scope of this Sector Scheme covers all aspects of road tunnel management, operation, installation and maintenance undertaken within the sector from planning, design, installation and operation, including asset management and maintenance and major refurbishment of road tunnels. The Organizations scope of registration should cover the activities with which it is involved. Similarly, the scope of accreditation for a Certification Body should cover the activities with which it is involved.
7. The Sector Scheme Advisory Committee has established a training group as a sub-group to the committee. This sub-group assists in the development and maintenance of national training and competency requirements for this Sector Scheme as necessary for the industry. It has the responsibility for the development and production of Appendix C of this document and makes recommendations in respect of paragraph 6.2.2 of this document.
8. It should be noted that national highway sector schemes are mandatory for Highways Agency contracts and existing suppliers should demonstrate compliance with the requirements of ISO 9001:2000 and this sector Scheme Document as part of their continuous improvement within their ISO 9001:2000 registration. It is anticipated that other highway authorities that use SHW as the basic document for procuring highway works may also require compliance with ISO 9001:2000 and this scheme document. Other Organizations may also require their suppliers to conform or comply with this scheme.

9. In using this Sector Schemes users shall use best practice of specifying any other relevant highway Sector Schemes as appropriate to the nature of the work being undertaken. Furthermore where there is a sector Scheme in place it must be used.
10. The SSD is a live document with the Sector Scheme Advisory Committee meeting at least once a year to develop it as appropriate. Those using the document should always ensure that they have the current version of the document by contacting any of the Certification Bodies in Appendix F, or UKAS at the address below or by visiting their website [www.ukas.com](http://www.ukas.com) from which free downloads are available.
11. A list of registered Organizations is maintained by the Secretary of the Sector Scheme Advisory Committee who can be contacted by writing, care of UKAS at the address given below. Lantra also maintain a schedule of suppliers for the national Highway sector Schemes, details of which can be accessed from their website <http://www.lantra-awards.co.uk/highways.htm>. The cost of managing the website is defrayed by a small annual charge made by Lantra Awards to those Organizations appearing on the register. (Lantra Awards can also be contacted directly at [nhsscheduleofsuppliers@lantra.co.uk](mailto:nhsscheduleofsuppliers@lantra.co.uk) in respect of any queries relating to the register).

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Any observations or feedback relating to this SSD should be addressed to the Committee Secretary using the feedback sheets provided as Appendices J1 and J2.

# Interpretation of BS EN ISO 9001: 2000

## 1. Scope

This Sector Scheme Document (SSD) describes the quality management requirements to be established by Organizations providing management, operation, installation and maintenance of road tunnels. The document interprets the requirements of BS EN ISO 9001:2000 and should be read in conjunction with that standard. The scope of the Sector Scheme will include, but not be limited to, the relevant aspects of the following:

- The undertaking and performance of road tunnel management, operation, installation and maintenance activities
- Design of and the operation of procedures for road tunnel traffic management, signs and signalling, communication, information, plant monitoring and control
- Appraisal of factors contributing towards a safe road tunnel environment for road users, local inhabitants, operators, maintenance staff, police and emergency services
- The training, and assessment of competency, of personnel
- Sustaining tunnel assets in a safe and usable condition, whilst obtaining best value for money
- Undertaking regular inspections designed to identify defects that are likely to create a danger to the public or staff or lead to unnecessarily high maintenance costs or disruption to traffic
- Recording and maintaining records

The Sector Scheme and the scope of registration shall be referenced in the Certificate of registration issued by the certification Body (see Appendix K).

## 2. Normative Reference

The following normative documents contain provisions which constitute provisions of BS EN ISO 9001: 2000 Quality management Systems - Requirements:

- BS EN ISO 9000:2005 Quality Management Systems – Fundamentals and Vocabulary
- BS EN ISO 9004:2000 Quality Management Systems – Guidelines for Performance Improvements

### 3. Terms and Definitions

For the purpose of this Sector Scheme Document the following definitions shall apply.

Administrative Authority	The body designated in relation to a road tunnel pursuant to regulation 4 of Road Tunnel Safety Regulations 2007
Authorising Officer	A person appointed by the Organization to assess the competency of individuals nominated for appointment as Authorised Persons and recommending them for authorisation by the Responsible Manager.
Authorised Person	A Competent Person authorised by the Organization to carry out specific elements of work appropriate to his/her level of competency as defined in the Training Specification.
Certification of Registration	A certificate issued by a UKAS, or equivalent, accredited Certification Body certifying that the holder operates a Quality Management System complying with BS EN ISO 9001:2000 and this Sector Scheme. The Certificate will state the category (ies) of work that the holder is competent to supply. (Appendix K).
Client	The body for which the work is being carried out, e.g. the Highway Body and its nominated representative.
Competent Person	A person assessed as having the necessary education, training, skills, experience and technical knowledge, to undertake their works, services and duties.
Compliance Manager	The person named in the Organization's Quality Plan as having responsibility for the development, review and continuous improvement of policies and procedures necessary to meet the criteria for activities carried out within this Sector Scheme.
Contract	The agreement between the parties governing the provision of works or services to which this SSD relates.
Contracting Office	The Organization's office from which work, which is carried out by Authorised Persons, is issued, managed and controlled.
Contract Specification	A specification contained in a Contract, which sets out the requirements of the Client. Examples include:  i) Employers requirements  ii) The Manual of Contract Documents for Highway Works  iii) Any Contract Specific Appendices  iv) Contract Drawings.
Customer	The body and its nominated representative engaging the Organization for the purpose of the work described in this Document. (The main contractor where the Organization is a sub-contractor.)
Designer	The person / body responsible for converting requirements into design output

	in the form of for example drawings, specifications, plans, instructions.
Health & Safety Officer	A person appointed to take part in the formulation, planning, implementation and evaluation of all safety aspects relating to this Sector Scheme
Highway / Road Tunnel	A subsurface highway structure with enclosed roof and sides not less than 150m in length the normal purpose of which is to enable vehicular traffic to use the highway / road which passes through it.
Inspection Entity	A person appointed pursuant to regulation 12 of the Road Tunnel Safety Regulations 2007
Maintenance Manager	The person responsible for the management of the maintenance of the tunnel.
Operations Manager	The person responsible for the management of the operation of the tunnel.
Operation and Maintenance Manual	Documents that contains all the information necessary for the safe and effective operation and maintenance of the tunnel, systems and system components so as to optimise their useful working life. This may include detailed manufacturer's operating and maintenance drawings, instructions and recommendations for the equipment, spare parts list
Organization	The body responsible for carrying out the work or the activities as set out in the Scope
Person	A person within this document can be a person or a corporate body, except where it is explicitly stated that this must be a named individual(s).
Qualified Supervisor	A person(s) having responsibility, training and experience to supervise maintenance and or installation activities and who shall have responsibility, on a day to day basis, for the safety, quality and technical standard of work carried out by all Authorised Persons under his supervision (see also Appendix L)
Quality Plan	The document setting out the specific quality practices, resources and sequence of activities relevant to the Contract.
Registered Authorised Person	An Authorised Person registered with the Tunnels Industry Scheme for the Registration of Authorised Persons or equivalent (see Appendix M)
Responsible Manager	The person named in the Organization's Quality Plan as having managerial responsibility for activities set out in the scope.
Responsible Person	The person as defined in the Reform (Fire Safety) Order 2005.
Safety Documentation	Documentation compiled pursuant to Annex II, Section 2 of the Road Tunnel Safety Regulation 2007.
Safety Officer (DMRB)	The person responsible for tunnel safety as defined within the Design Manual for Roads and Bridges (DMRB); BD79/99 Design of Road Tunnels and BA72/03 Maintenance of Road Tunnels.
Safety Officer (TERN)	The person as defined under regulation 10 of the Road Tunnel Safety Regulations 2007, who coordinates all preventative and safeguard measures to ensure the safety of users and operational staff at (where appropriate) the

design stage, the construction stage, and the operating stage.

“shall”			Used to indicate a requirement strictly to be followed in order to conform to the standard and from which no deviation is permitted. (See ISO Directives Part 3: 1997, Annex E) (reference “Guidance on the terminology used in ISO 9001 : 2000 and ISO 9004 : 2000).
Technical Operative	Control Room		The person responsible for monitoring tunnel plant and control system faults and controlling tunnel plant.
Technical Supervisor	Control Room		The person responsible for supervising Technical Control Room Operatives.
Trans-European Network (TERN)	Road Tunnels		Road tunnels over 500 metres in length that form part of the Trans-European Road Network
Traffic Room)	Officer (Control Room)		The person responsible for the monitoring of traffic, the operation of traffic control systems, deployment of resources and initiation of appropriate procedures.
Traffic Officer (On-road)			The person responsible for attending incidents and controlling traffic.
Traffic Officer Supervisor(s)			The person responsible for supervising Traffic Officers.
Training Group			A sub group of the Sector Scheme Advisory Committee responsible for formulating proposals to the committee on training and competence
Training Specification			A specification, developed by the Training Group, which specifies the training requirements of employees carrying out work outlined in Clause 1 Scope and in line with the underpinning knowledge requirements for the appropriate level and unit(s) of the NVQ/SVQ where relevant.
Tunnel Manager (DMRB)			The person with overall responsibility for matters relating to administration, operation and maintenance of tunnels, and possibly parts of the adjacent road network as defined within the Design Manual for Roads and Bridges; BD79 Design of Road Tunnels and BA72 Maintenance of Road Tunnels.
Tunnel Manager (TERN)			The person as defined under regulation 8 of Road Tunnel Safety Regulations 2007 with responsibility for management of the tunnel at (where appropriate) the design stage, the construction stage, and the operating stage.
Tunnel Operating Authority (TOA)			The agency, or combination of agencies, responsible for the day to day management, operation installation and maintenance of a road tunnel.

## 4. Quality Management System Requirements

This document shall be read in conjunction with the ISO 9001:2000 requirements augmented by the following supplementary requirements. Paragraph numbers in sections 4 to 8 reference appropriate paragraphs of BS EN ISO 9001:2000.

Where no reference to a heading is listed this means that it is not considered necessary to provide an interpretation for that clause or sub-clause in the context of this scheme.

### 4 Quality Management System

#### 4.1 General Requirements

The Organization shall operate a quality management system to BS EN ISO 9001:2000 and to this Sector Scheme.

The Organization shall notify Lantra Awards (Lantra House, Stoneleigh Park, Kenilworth, CV8 2LG) of their certification against this scheme immediately following confirmation from the Certification Body and thereafter annually. In addition the Organization shall provide details of a focal point for the Organization at the time of notification.

#### 4.2 Documentation Requirements

##### 4.2.1 General

- (i) The Organization shall submit a Quality Plan or alternative document as defined in the Contract Specification for acceptance or approval by the Client, as appropriate, prior to commencement of work.

The relevant Quality Plan and standard operating procedures shall be available to all parties involved in the scope of activities and shall be signed by each operative.

- (ii) See also paragraphs 7.1, 7.3, 7.5.1(i), 7.5.1(iii), 7.5.4, 7.5.5 and 7.6 below for further documentation requirements.

##### 4.2.2 Quality Manual

No specific interpretation

##### 4.2.3 Control of Documents

As part of the Organizations procedures for document control, the following contract specific documents are typically required to be controlled, this shall include, but not be limited to, as applicable:

- a Correspondence
- b Delivery notes and certification where required, e.g. materials testing, provenance certificates.
- c Records of rejected material
- d Training records/certificates
- e Contract documentation and customer order
- f Customer specification, drawings and records
- g Instructions to office staff, site staff and control room staff
- h Health and safety information or requirements
- i Safety Documentation
- j Operation and Maintenance Manuals
- k Compliance, Management, Operation, Maintenance and Safety Reports
- l Calibration and maintenance records.
- m Methods to ensure the Organization obtains any amendments or replacements to the documents listed in Appendix B where appropriate to the scope of registration

and contract specification.

#### **4.2.4 Control of Records**

(i) In addition to the Organization's own quality records, contract specific records shall include, where appropriate, but not limited to:

- a Customers specification and any variations
- b Review records
- c Quality plan
- d Instructions to Operatives
- e Certification of supply of materials
- f Purchase orders
- g Calibration and verification records
- h Experience and training records of all personnel
- i Complaints
- j Reasons for work stoppages / delays
- k Results of all inspections and tests undertaken which shall be made available to the customer and / or client on request
- l Details of any incidents known to the Organization within or adjacent to the road tunnel and tunnel buildings.

(ii) The Organization shall keep all records after completion as required by the terms of the Contract or for a minimum of six years which ever is the longer. Record disposition after this period shall be defined in the Quality Plan.

## **5 Management Responsibility**

### **5.1 Management Commitment**

No specific interpretation

### **5.2 Customer Focus**

Processes for delivering Customer requirements shall consider the interests of the Customer and / or Client, the product end users i.e. the general public/travelling public, Police and emergency services, and shall be mindful of the Customer's and / or Client's interaction with the end users and service providers. This shall include processes to minimise disruption to traffic and third parties.

### **5.3 Quality Policy**

The organization's quality policy statement shall include a statement of commitment to this Sector Scheme.

### **5.4 Planning**

#### **5.4.1 Quality Objectives**

No specific interpretation

#### **5.4.2 Quality management system planning**

Aspects of tunnel documentation will be of particular interest to parties such as traffic operators, police, emergency services, maintaining and environmental authorities. Emphasis must be placed on the early detailed and continuous consideration that must be given, by the relevant parties involved, to particular aspects of safety peculiar to the road tunnel and the overall cooperation, interaction and teamwork that is required to effectively manage, operate

and maintain the road tunnel.

## **5.5 Responsibility, Authority and communication**

### **5.5.1 Responsibility and Authority**

No specific interpretation

### **5.5.2 Management Representative**

No specific interpretation

### **5.5.3 Internal Communication**

No specific interpretation

## **5.6 Management Review**

### **5.6.1 General**

The Organization shall review the quality management system to ensure its continuing suitability and effectiveness to meet the requirements of this Sector Scheme at least once a year, or on occasions when a significant change in the Contract Specification takes place.

### **5.6.2 Review Input**

No specific interpretation

### **5.6.3 Review Output**

No specific interpretation

## **6 Resource Management**

### **6.1 Provision of Resources**

No specific interpretation

### **6.2 Human Resources**

#### **6.2.1 General**

No specific interpretation

#### **6.2.2 Competence, Awareness and Training**

##### **(i) Management Resources, Responsibilities and Qualifications**

The Organization shall appoint the following persons where appropriate. Guidance on their roles and responsibilities are detailed in Appendix L.

1. Authorising Officer(s)
2. Compliance Manager(s)
3. Inspection Entity(ies)
4. Maintenance Manager(s)

5. Operations Manager(s)
6. Qualified Supervisor(s). The number of Qualified Supervisors shall be appropriate to the range, scale and geographical spread of the work undertaken from each Contracting Office and/or each tunnel.
7. Responsible Manager(s)
8. Safety Officer(s)
9. Technical Control Room Operator(s)
10. Technical Control Room Supervisor(s)
11. Traffic Officer(s) (Control Room)
12. Traffic Officer(s) (On-road)
13. Traffic Officer Supervisor(s)
14. Tunnel Manager(s)

A person nominated as Authorising Officer or Qualified Supervisor shall be a Registered Authorised Person. A Person may have more than one function however an Authorising Officer cannot be the Responsible Manager or the Qualified Supervisor for a given employee.

**(ii) Qualifications, Training Requirements and Assessment of Competence**

The Organization shall meet the following requirements for each tunnel.

1. Quality System Familiarisation
  - Shall include
    - a. Induction Training
    - b. Organization's operating procedures and safe systems of work
2. Training for Competence
  - a. Shall be in accordance with Appendix C
3. Assessment of competence for Authorised Persons by the Organization's Authorising Officer(s)
  - a. Each employee shall be assessed by the Organization's Authorising Officer(s) to ensure that they are competent to carry out the work they are required to perform to the appropriate level of competency as defined in the Training Specification.
  - b. Once the Authorising Officer(s) is satisfied that the employee is a Competent Person he shall issue a certificate of authorisation to carry out work which shall be signed by the Responsible Manager. The appropriate level of authorisation shall be shown on the certificate.
  - c. The Organization shall have procedures, which specify how the Authorising Officer(s) shall ensure the continuing competence of employees. As a

minimum the following employee competence reviews shall take place:

- i. An annual desk top review including, where applicable, the results of the two - yearly third party technical audit.

The requirements for qualification and experience for Competent Persons, Qualified Supervisors and Authorising Officers are given in Appendix C.

**(iii) Employee Register**

The Organization shall register their Authorised Persons with the Road Tunnel Industry Scheme for the Registration of Authorised Persons.

A Road Tunnel Registration Card shall be issued under this scheme to each Authorised Person, which shall be carried at all times.

Further information on the registration process may be found at [www.rtoa.org.uk](http://www.rtoa.org.uk) Information on the Highways Agency's Workforce Registration/Skill Card requirements for suppliers may be found at [www.highways.gov.uk/business/13630.aspx](http://www.highways.gov.uk/business/13630.aspx).

**(iv) Record of Practical Experience and Continuous Professional Development**

The Organization shall maintain a portfolio of the practical experience gained by its employees. This portfolio shall indicate the relevant experience with reference to the appropriate training level contained in the Training Specification.

The Organization shall have a planned programme for the continuing professional development of its employees, which shall include the frequency of refresher training at intervals not greater than five years.

**(v) Organizational Requirements**

Employees who are undergoing training can carry out work for which they have not been authorised as competent only under the direct supervision of a Registered Authorised Person who has been authorised at the appropriate level of competence as defined in the Handbook for Management, Operation, Installation and Maintenance of Road Tunnels Scheme for the Registration of Authorised Persons.

New employees who have evidence that they are Registered Authorised Persons from a previous employer or who have evidence of transferable competence from a previous employer (e.g. from another tunnel or associated industry) may carry out work immediately prior to registration as a Registered Authorised Person only if the following four conditions are satisfied:-

1. The Authorising Officer(s) is satisfied that the new employee is competent to carry out any work assigned to him.
2. An application is made within one month of the date of employment, for the new employee to be registered as a Registered Authorised Person and issued with a Road Tunnel Industry Registration interim card. (Which is valid for one year only and is not renewable)
3. Within one month of employment the Qualified Supervisor(s) shall commence the evidence gathering process for the completion of the employee's competency portfolio. Prior to the expiry of the Road Tunnel Industry Registration interim card, the portfolio must be completed and submitted to the Authorising Officer(s).
4. An application is submitted, prior to the expiry of the Road Tunnel Industry Registration interim card, for the employee to be registered as a Registered Authorised Person and be issued with a standard Road Tunnel Industry Registration card which is valid for 3 years.

### **6.3 Infrastructure**

No specific interpretation

### **6.4 Work Environment**

No specific interpretation

## **7 Product Realization**

### **7.1 Planning of product realisation**

- (i) The Quality Plan shall as a minimum address the topics listed in Appendix A of this schedule.
- (ii) The Quality Plan may be a largely standard document as indicated in Appendix A of this schedule supplemented by contract specific information.
- (iii) The Quality Plan should not be considered in isolation. An integrated approach should be taken which links the Quality Plan, Environment Plan, Sustainability Plan and the Health and Safety Plan together. Management of the service as a whole cannot be separated, as one cannot function without the other.
- (iv) The Quality Plan describes the management strategy that sets clear and sustainable performance objectives, delegate's responsibility and establishes lines of communications.

### **7.2 Customer Related Processes**

#### **7.2.1 Determination of Requirements Relating to the Product**

- (i) Processes for determining customer requirements shall consider the interests of the Customer, Operator, Maintainer and the end user. This will include processes to minimise disruption to traffic, neighbours and other third parties.
- (ii) Determination of requirements related to the product and services should include:
  - Resource efficiency aspect requirements specified by the Customer;
  - Resource efficiency aspect requirements not stated by the Customer but necessary for specified or intended use, where known; and
  - Statutory and Regulatory Requirements related to the resource and resource efficiency aspects of the product and service.

#### **7.2.2 Review of Requirements Relating to the Product**

- (i) The review processes shall require the Organization to verify with the Customer and / or Client that the order placed meets the technical requirements included in the Customer and / or Client's Contract Specification.
- (ii) Matters of a significant nature which arise during the determination and review of requirements shall be considered during the management review and incorporated as necessary into the quality management system.
- (iii) The Organization shall, prior to commencement, check the practicality of the proposed work. This may include liaison with third parties, e.g. the Highway Bodies, technical Approval Authority, Traffic Officer, Police, Emergency Services, the Customer and / or Client. Where irregularities or inconsistencies with the specification or health and safety requirements are encountered these shall be brought to the attention of the Customer and /

or Client for resolution .

- (iv) The review method shall include processes to establish Customer and / or Client testing and inspection requirements.
- (v) Matters of a significant nature, which arise during these review processes, shall be considered at management reviews and incorporated as necessary into the quality system.

### **7.3 Design and Development**

Attention is drawn to the requirements contained in the DMRB, and in particular, –GD02 Quality Management Systems for Highway Design for those organisations where these documents are applicable.

### **7.4 Purchasing**

- (i) The Organization shall establish procedures to ensure that supplies of services and materials are obtained from a list of approved suppliers.
- (ii) The Organization shall establish procedures to ensure that all services and materials conform to the Contract Specification. In the absence of a Contract Specification, European Community Directives and Standards may apply. All copies of certification which verify product conformity of materials shall, on request, be passed to the Customer and / or Client.

### **7.5 Production and Service Provision**

#### **7.5.1 Control of Production and Service Provision**

- (i) Where appropriate the Organization shall produce quality management plans for the management, operation, installation and maintenance of the road tunnel and associated infrastructure under the scope of the Sector Scheme.
- (ii) The Organization shall have access to and a working knowledge of the relevant documents listed in Appendix B of this schedule together with the Contract Specification.
- (iii) The Organization shall ensure that any special instructions relating to the service and programme of activities is documented and issued to all relevant personnel.

#### **7.5.3 Identification and Traceability**

There must be an auditable process of document retention which can be clearly identified and traced.

#### **7.5.4 Customer Property**

The quality management system shall include a procedure to be applied where material is supplied by the Customer and / or Client.

#### **7.5.5 Preservation of Product**

- (i) When appropriate to the contract, storage arrangements and delivery programme for all materials shall be stated in the Quality Plan.
- (ii) Systems shall be in place to ensure goods returned to stock are placed at the correct location in the materials storage area.
- (iii) Systems shall be in place to ensure stock materials are protected and preserved from deterioration or damage which adversely affects their performance or life.

## **7.6 Control of Monitoring and Measuring Devices**

- (i) The Organization shall have access to adequate numbers of transportable and non-fixed calibrated test instruments and test leads appropriate to the range and scale of work being carried out at each Tunnel, and shall have documented processes to demonstrate the manner and frequency of the calibration. The frequency, shall be either in accordance with the equipment manufacturer's recommendations, or at intervals, not exceeding twelve months, whichever is the lesser period. See Appendix E
- (ii) In house equipment used for calibration checks shall not be used for any other purpose and shall be re-calibrated traceable to National Standards at appropriate intervals.

## **8 Measurement, Analysis and Improvement**

### **8.1 General**

Inspection, monitoring and appropriate testing shall be undertaken to demonstrate adherence to the Contract Specification.

### **8.2 Monitoring and Measurement**

#### **8.2.1 Customer Satisfaction**

No specific interpretation

#### **8.2.2 Internal Audit**

Internal audits of the quality management system against this SSD shall include the following:

1. Annual office-based audits of administrative procedures
2. Biennial on-road audits
3. Following a major incident and /or any significant failure of the quality management system that may result in injury or damage.

#### **8.2.3 Monitoring and Measurement of Processes**

This includes the ongoing impact of Sector Scheme activities on other works including congestion, operational safety and traffic flows, and the implementation of management processes

#### **8.2.4 Monitoring and Measurement of Product**

In accordance with the Road Tunnel Industry Scheme for the Registration of Authorised Persons, a third party technical audit shall be carried out to validate the assessment of Authorised Persons carried out by the Organizations Authorising Officer(s). The period between audits shall be no greater than every two years per tunnel and / or Contracting Office.

There is no requirement to have undergone the Technical Audit prior to third party certification by the Organization's Certification Body. However in order to achieve third party certification by the Organization's Certification Body, the organization shall be registered to the Road Tunnel Industry Scheme for the Registration of Authorised Persons and the organization shall have registered its employees to the Road Tunnel Industry Scheme for the Registration of Authorised Persons which will have included an assessment of employees' portfolios by the Organization's Authorising Officer(s) and a structural review of at least 10% of the portfolios by the Road Tunnel Industry Scheme Administrator.

### **8.3 Control of Non-conforming Product**

Non-conforming component parts and schemes shall not be used unless written approval has been received from the client.

### **8.4 Analysis of Data**

No specific interpretation.

### **8.5 Improvement**

#### **8.5.1 Continual improvement**

The corrective and preventative action processes shall include analysis of incidents and occurrences.

#### **8.5.2 Preventative action**

No specific interpretation.

## APPENDIX A: REQUIREMENTS FOR QUALITY PLANS

The Quality Plan shall include the following as appropriate:

### 1. General Requirements

- 1.1 Definition of the product or service being provided.
- 1.2 The structure of the Organization describing the line of command, including the names of the personnel performing the key roles and the senior manager responsible, and personnel managing the work. This shall include contact details.
- 1.3 Identification of the relevant parts of the Organization's quality manual relevant to the product or service being provided.\*
- 1.4 The control of personnel selection including special requirements for skilled personnel, e.g. key roles and training of staff.
- 1.5 The control of equipment.
- 1.6 The Customer's nominated Quality Manager, project manager and/or other representatives through whom communication is to be made throughout the contract.

### 2 Contract Specific Information

- 2.1 Names of the staff involved with the contract including the Registered Authorised Persons. Contact details for these staff.
- 2.2 Details of the contract specific equipment to be used and any certification required to be issued to the Customer/Client.
- 2.3 Name and contact details of Customer/Client contact(s).
- 2.4 Details of the communications required between the Organizations staff and the Customer/Client or any other party.
- 2.5 Work programme and details of deliverables.

\* Copies of the Organization's general procedures covering these items shall be made available for examination by the Customer and / or Client's representative, copies are to be provided when requested.

Note 1: Where certain aspects of this information cannot be obtained or, is not provided, this fact shall be noted in the Quality Plan against the appropriate section.

Note 2: Reference should also be made to Sample Appendix 1/24 in the Notes for Guidance on the Specification for Highway Works where this is incorporated into the main Contract and Appendix H of the Specification for Highway Works.

## APPENDIX B: REFERENCE AND ASSOCIATED DOCUMENTS

The listing is not comprehensive; other documents may be required to fulfil the requirements of the Contract. Organizations shall ensure that they have a working knowledge and access to the relevant documents including amendments and revisions as appropriate.

- 1 Manual of Contract Documents for Highway Works: Volumes 0 – 5 (TSO- [www.tso.co.uk](http://www.tso.co.uk)) (internet <http://www.archive2.official-documents.co.uk/document/deps/ha/mchw/index.htm>)
- 2 BS EN ISO 9000:2005 Quality Management Systems – Fundamentals and Vocabulary
- 3 BS EN ISO 9001:2000 Quality Management System – Requirements
- 4 BS EN ISO 9004:2000 Quality Management Systems – Guidelines for Performance Improvements
- 5 ADR Directive 2007 (Issue 6)
- 6 The Design Manual for Roads and Bridges (<http://www.highways.gov.uk/business/238.aspx>)
- 7 The Road Tunnel Safety Regulations 2007
- 8 Regulatory Reform (Fire Safety) Order 2005
- 9 Handbook for the Road Tunnel Industry Scheme for the Registration of Authorised Persons.
- 10 BS 7671:2008 Requirements for Electrical Installations, IEE Wiring Regulations
- 11 GD02 Quality Management Systems for Highway Design (DMRB 5.2.1)(TSO – [www.tso.co.uk](http://www.tso.co.uk))
- 12 PIARC Technical Committee Road Tunnel Reports

## **APPENDIX C: TRAINING AND COMPETENCE**

Currently a working party is in the process of identifying specific training and competency requirements for the road tunnel management, operation, installation and maintenance industry.

Training and competency routes are currently being developed and will be available in a specification. It is anticipated that competency qualifications will be those accepted as industry best practice and based on or mapped in to National Occupational Standards and the associated training will be based on these national standards. Where training and/or competency qualifications are identified for which there is no suitable course available consideration will be given to the development of specific courses and vocational related qualifications.

### **Introduction:**

The enclosed nature of a road tunnel requires the general responsibilities of effective management of risks above and beyond that of an open road. Additional safety equipment and procedures are provided for road tunnels to help manage such risks so that any consequence of their occurrence is minimised. Such equipment must, therefore, be well maintained throughout the tunnel's working life. Procedures must be regularly reviewed so that they remain effective at all times. The issue of ensuring safety remains a key objective. Operation is a complex process requiring many different skills and specialisms.

### **General:**

All staff must have the necessary qualifications, knowledge and experience to carry out their duties and responsibilities effectively. Competence for the management, operation, installation and maintenance of road tunnels will require demonstrated ability to apply knowledge and skills.

Safe and successful management, operation, installation and maintenance work requires training and experience. In particular, it is essential that the key tunnel management staff and operation and maintenance supervisors, as appropriate, are experienced and competent in all aspects of their duties.

### **Tunnel Management:**

Tunnel Managers should have suitable experience in a senior management position. They have overall responsibility for matters relating to administration, operation and maintenance of the road tunnel, and possibly parts of adjacent road network. And, for Act of Parliament Tunnels, enforce bylaws relating to vehicles carrying dangerous goods.

Note: The Tunnel Operating Authority (TOA) is the competent body, providing a nucleus of trained staff who are competent in the operation, inspection and maintenance requirements of the tunnel functions, together with the necessary maintenance plant and equipment which is responsible for the tunnel operation and whose staff are also capable of providing advice and assistance to the police and emergency services. The staff that form part of the TOA may include the Tunnel Manager, Operations Manager, Safety Officer, Maintenance Manager and the Inspection Entity.

### **Operations:**

Tunnel operating staff must receive the required training in order to minimise incidents and to ensure the safety of users, maintenance and operational staff. Operational staff who work on the control and supervision of tunnel operations on a day to day basis occasionally need to deal with highly critical and major incidents. These operators need robust detection methods and explicit response procedures to identify and respond appropriately to all situations including highly critical and major incidents. The situation is the same for all the other staff working on tunnels: operation managers, police and other emergency services.

Tunnel Operations includes, but is not limited to:

- Traffic monitoring
- Handling emergency roadside telephone calls

- Managing traffic signs and signals
- Operational liaison with Police and other emergency services
- Despatch of Patrol Vehicles, Incident Support Units and vehicle recovery vehicles,
- Initiating and implementing emergency procedures
- Control of tunnel equipment and safety systems.

### **Maintenance:**

The objective of tunnel maintenance is to ensure assets remain in a safe and usable condition, whilst obtaining best value for money. Such maintenance should also promote the safety of the travelling public and personnel, avoid delays, and minimise any adverse environmental impacts.

The maintenance of road tunnels encompasses a broad range of activities captured by other National Highway Sector Schemes.

It is therefore likely that all Sector Scheme activities will be performed within or in association with road tunnels.

### **Authorised Person**

In order to attain Authorised Person status, persons shall be required to be trained in accordance with the Training Specification covering all appropriate modules relevant to the occupation of the Authorised Person and obtain an appropriate N/SVQ qualification, at the appropriate unit and level commensurate with their designated occupation. Exceptions to this requirement are as follows:

- a. Persons who have been continuously employed in this specific role for at least three years up to and including the Industry Accreditation cut-off date specified in Appendix K and who are registered to the Road Tunnel Industry Scheme for the Registration of Authorised Persons via the Industry Accreditation entry route. If the employee leaves the road tunnel industry and returns after a period greater than one year, then this exception shall not apply. This exception shall be reviewed regularly by the Sector Scheme advisory committee. At present the committee feels that a period for Industry Accreditation shall apply and that these rights shall not extend beyond a period of 10 years.
- b. Persons who undertake work for which no N/SVQ qualification at level 2 or 3 currently exists. It should be noted that after the five yearly review of each N/SVQ, this exception may no longer apply.

## Qualified Supervisor

MINIMUM TECHNICAL QUALIFICATIONS	QUALIFIED SUPERVISOR EXPERIENCE LEVELS	
	Appropriate N/SVQ plus successful completion of the RT Registration Scheme Administrator's Qualified Supervisor's course and required updates.	Route 1
Appropriate qualifications received from current or previous employer leading to assessment of competence by the Authorising Officer plus successful completion of the RT Registration Scheme Administrator's Qualified Supervisor's course and required updates	Route 2	Sufficient Initial and Continuing Professional development to show competence (This does not have a minimum time period, as it is the outcome which is measured. It would be unusual however for anyone with less than three years experience to have attained the breadth and depth of competence required) but having no evidence of formal training to the underpinning knowledge requirements of NVQ/SVQ Level 3 or equivalent but able to provide evidence of attending recognised courses appropriate to the work undertaken.

## Authorising Officer

MINIMUM TECHNICAL QUALIFICATIONS	AUTHORISING OFFICER EXPERIENCE LEVELS	
	Appropriate N/SVQ or equivalent plus successful completion of the RT Registration Scheme Administrator's Authorising Officers Course and required updates, instead of or as well as the Qualified Supervisor's Course.	Route 1
Appropriate qualifications received from current or previous employer leading to assessment of competence by the Responsible Manager plus successful completion of the RT Registration Scheme Administrator's Authorising Officers Course and required updates, instead of or as well as the Qualified Supervisor's Course.	Route 2	Sufficient Initial and Continuing Professional development to show competence (This does not have a minimum time period, as it is the outcome which is measured. It would be unusual however for anyone with less than two years experience to have attained the breadth and depth of competence required)

### Traffic Officer (Control Room and On-road)

In order to attain Traffic Officer status, persons shall be trained in accordance with the Training Specification covering all appropriate modules relevant to the occupation of the Traffic Officer and obtain an appropriate Traffic Management qualification, at the appropriate level commensurate with their designated occupation. Exceptions to this requirement are as follows:

- a. Persons who have been continuously employed in the specific role for at least three years up to and including the Industry Accreditation cut-off date specified in Appendix K and who are registered to the Road Tunnel Industry Scheme for the Registration of Authorised Persons via the Industry Accreditation entry route. If the employee leaves the road tunnel industry and returns after a period greater than one year, then this exception shall not apply. This exception shall be reviewed regularly by the Sector Scheme advisory committee. At present the committee feels that a period for Industry Accreditation shall apply and that these rights shall not extend beyond a period of 10 years.

MINIMUM TECHNICAL QUALIFICATIONS	TRAFFIC OFFICER EXPERIENCE LEVELS	
	Appropriate Traffic Management certificate	Route 1
Appropriate qualifications received from current or previous employer leading to assessment of competence by the Authorising Officer	Route 2	Sufficient Initial and Continuing Professional development to show competence (This does not have a minimum time period, as it is the outcome which is measured. It would be unusual however for anyone with less than one years experience to have attained the breadth and depth of competence required) but having no evidence of formal training to the underpinning knowledge requirements of an appropriate Traffic Management certificate but able to provide evidence of attending recognised courses appropriate to the work undertaken.

## Tunnel Manager(s)

The Tunnel Manager is the person with responsibility for the management of the tunnel at (where appropriate) the design stage, the construction stage and the operating stage.

Agents shall notify the Administrative Authority or Highway Body, where appropriate, in writing the name and CV of the individual in their organization who will undertake the role of Tunnel Manager for any tunnels that they are designing, constructing or operating for the Administrative Authority / Highway Body's approval and advise the Administrative Authority / Highway Body in writing and seek approval for any subsequent changes in personnel.

In order to attain Tunnel Manager status persons shall have suitable experience in a senior management position

MINIMUM TECHNICAL QUALIFICATIONS	TUNNEL MANAGER EXPERIENCE LEVELS	
	Chartered Engineer with appropriate engineering qualification	Route 1
Appropriate qualifications received from current or previous employer leading to assessment of competence	Route 3	Sufficient Initial and Continuing Professional development to show competence (This does not have a minimum time period, as it is the outcome which is measured. It would be unusual however for anyone with less than three years experience to have attained the breadth and depth of competence required)

## Operation Manager(s)

The Operation Manager is the person with overall responsibility for operation of the tunnel, development of the operational plans and procedures in consultation with the TOA and appropriate stakeholders on behalf of the Tunnel Manager.

The Tunnel Manager shall notify the Administrative Authority or Highway Body, where appropriate, in writing of the name and CV of the individual in their organization who will undertake the role of Operation Manager for any tunnels that they are designing, constructing or operating for the Administrative Authority / Highway Body's approval and advise the Administrative Authority / Highway Body in writing and seek approval for any subsequent changes in personnel.

- b. In order to attain Operation Manager status persons shall be qualified in Emergency Planning with suitable experience in a senior operational role

MINIMUM TECHNICAL QUALIFICATIONS	OPERATION MANAGER EXPERIENCE LEVELS	
Appropriate qualifications received from current or previous employer leading to assessment of competence	Route 1	Sufficient Initial and Continuing Professional development to show competence (This does not have a minimum time period, as it is the outcome which is measured. It would be unusual however for anyone with less than three years experience to have attained the breadth and depth of competence required)

## Safety Officer(s)

The Safety Officer is the person who coordinates preventative and safeguard measures to ensure the safety of users and operational staff at (where appropriate) the design stage, the construction stage, and the operating stage.

The Tunnel Manager shall nominate the Safety Officer and shall notify the Administrative Authority or Highway Body (where appropriate) in writing the name and CV of the individual in their organization who will undertake the role of Safety Officer for any tunnels that they are designing, constructing or operating for the Administrative Authority / Highway Body's approval and advise the Administrative Authority / Highway Body in writing and seek approval for any subsequent changes in personnel.

- a. In order to attain Safety Officer status persons shall have suitable experience in a senior operational position

MINIMUM TECHNICAL QUALIFICATIONS	Safety Officer	
	EXPERIENCE LEVELS	
Appropriate qualifications received from current or previous employer leading to assessment of competence	Route 1	Sufficient Initial and Continuing Professional development to show competence (This does not have a minimum time period, as it is the outcome which is measured. It would be unusual however for anyone with less than three years experience to have attained the breadth and depth of competence required)

## Inspection Entity(ies)

The Inspection Entity is the entity undertaking independent inspections, evaluations and tests being functionally independent from the Tunnel Manager.

The Tunnel Manager shall nominate the Inspection Entity and shall notify the Administrative Authority or Highway Body (where appropriate) in writing the name and CV of the person who will undertake the role of Inspection Entity or lead the Inspection Entity for any tunnels that they are designing, constructing or operating for the Administrative Authority / Highway Body's approval and advise the Administrative Authority / Highway Body in writing and seek approval for any subsequent changes in personnel.

- a. In order to attain Inspection Entity status persons shall be a Chartered Engineer with suitable experience in a senior technical and managerial position

MINIMUM TECHNICAL QUALIFICATIONS	INSPECTION ENTITY EXPERIENCE LEVELS	
	Chartered Engineer or headed by a Chartered Engineer with an appropriate engineering degree	Route 1
Route 2		Sufficient Initial and Continuing Professional development to show competence (This does not have a minimum time period, as it is the outcome which is measured. It would be unusual however for anyone with less than three years experience to have attained the breadth and depth of competence required)

### Maintenance Manager(s)

The Maintenance Manager is the person responsible for maintaining the technical facilities of the tunnel.

- a. In order to attain Maintenance Manager status persons shall have suitable experience in a senior technical and managerial position

MINIMUM TECHNICAL QUALIFICATIONS	MAINTENANCE MANAGER EXPERIENCE LEVELS	
Appropriate qualifications received from current or previous employer leading to assessment of competence	Route 1	Sufficient Initial and Continuing Professional development to show competence (This does not have a minimum time period, as it is the outcome which is measured. It would be unusual however for anyone with less than three years experience to have attained the breadth and depth of competence required)

### Traffic Officer Supervisor(s)

- a. In order to attain Traffic Officer Supervisor status, persons shall be trained to at least the same level as a Traffic Officer

MINIMUM TECHNICAL QUALIFICATIONS	TRAFFIC OFFICER SUPERVISOR EXPERIENCE LEVELS	
Appropriate Traffic Management certificate	Route 1	Sufficient Initial and Continuing Professional development to show competence (This does not have a minimum time period, as it is the outcome which is measured. It would be unusual however for anyone with less than three years experience to have attained the breadth and depth of competence required)
Appropriate qualifications received from current or previous employer leading to assessment of competence	Route 2	Sufficient Initial and Continuing Professional development to show competence (This does not have a minimum time period, as it is the outcome which is measured. It would be unusual however for anyone with less than two years post qualification experience to have attained the breadth and depth of competence required)

## Technical Control Room Supervisor(s)

MINIMUM TECHNICAL QUALIFICATIONS	TECHNICAL CONTROL ROOM SUPERVISOR EXPERIENCE LEVELS	
	Appropriate N/SVQ	Route 1
Appropriate qualifications received from current or previous employer leading to assessment of competence	Route 2	Sufficient Initial and Continuing Professional development to show competence (This does not have a minimum time period, as it is the outcome which is measured. It would be unusual however for anyone with less than three years experience to have attained the breadth and depth of competence required)

All other job qualifications and competences would be defined through the Occupations and Competency Matrix .

## Health and Safety

Organizations are reminded of the legal requirements to provide health and safety training for each employee in accordance with the Health and Safety at Work Act 1974.

The training and assessment of employees required by this Scheme is aimed primarily at technical competence for the management, operation, installation and maintenance of road tunnels, associated infrastructure and highway activities. It is also intended to provide awareness to carry out work in a safe manner; however, it remains the responsibility of the Organization to determine and implement safe practices and safe systems of work.

## Enquiries

For further information and details please contact the Secretariat:

The Secretary  
Sector Scheme 22 Advisory Committee  
C/o UKAS  
21-47 High Street  
Feltham  
Middlesex  
TW13 4UN  
Tel 0208 917 8400  
Fax 0208 917 8500

**APPENDIX D: EXAMPLE REGISTER OF MANAGEMENT,  
OPERATION, INSTALLATION AND MAINTENANCE  
OF ROAD TUNNEL STAFF**

**NAME OF ORGANIZATION:** .....

Full name of Employee	Occupation	Registration Renewal Date	Type of (Activity/Work Aspect) for which Operative is registered

## APPENDIX E: GUIDANCE FOR THE CONTROL OF MONITORING AND MEASURING DEVICES

Item of Plant	Inspection /Test	Purpose/Comments	Minimum Frequency

## APPENDIX F: ACCREDITED CERTIFICATION BODIES

When implemented, information on certification bodies accredited against this scheme can be found on the UKAS website [www.ukas.com](http://www.ukas.com). To identify the certification bodies on the website:

- place the cursor onto 'about accreditation' in top grey menu bar
- move down to 'accredited bodies'
- move across to 'certification body schedules' and left click on this to take you to the list of schedules
- move down past 'key abbreviations' to 'search within the schedules' - click on 'advanced search'
- type 'Highway Sector Scheme No 22' in the box and tick the square by 'search UKAS documents'
- left click 'search'
- this then lists the certification bodies who are accredited and their details can be found by clicking on the appropriate links.

NOTE: Advice on the accreditation status of certification/inspection bodies to assess against this document (NHSS 22) should be sought from UKAS (Tel 0208 917 8400).

As at 31 July 2008, the following certification/inspection bodies have indicated their interest to become accredited.

BM TRADA Certification Ltd	<a href="http://www.bmtrada.com">www.bmtrada.com</a>
Lloyd's Register Quality Assurance	<a href="http://www.lrqa.com">www.lrqa.com</a>
BSI	<a href="http://www.bsi-global.com">www.bsi-global.com</a>
SGS UK Ltd	<a href="http://www.sgs.co.uk">www.sgs.co.uk</a>

## **APPENDIX G: THE ROLE OF THE CERTIFICATION BODY AND AUDITOR QUALIFICATIONS**

### **1. Role of Certification Bodies**

- 1.1. The independent assessment of conformity of Organizations to the requirements of BS EN ISO9001:2000 and the additional requirements required by this SSD relies upon the assessment expertise, competence and capability of accredited certification bodies.
- 1.2. The Certification Body role is to ensure, through assessment, that Organizations have management systems in place which address the enhanced BS EN ISO9001:2000 requirements detailed in this SSD.

### **2. Certification Body Accreditation**

- 2.1. To ensure consistency and to demonstrate independent capability Certification Bodies are required to be accredited against the requirements of EN450012/ISO Guide 62 by the United Kingdom Accreditation Service (UKAS) or an equivalent International Accreditation Forum (IAF) member for assessment and registration of BS EN ISO9001:2000 quality management systems interpreted in accordance with this NHSS.

**NB** 15 September 2008 Certification Bodies will be assessed against the requirements of BS EN ISO 17021-1:2006

### **3. Assessor and Assessment Team Competence.**

- 3.1 The Certification Body must be able to demonstrate to UKAS that it possesses and can maintain the necessary assessor experience and technical understanding of the management, operation, installation and maintenance of road tunnels covered in the scope of this Sector Scheme. These assessment areas include, but not are limited to the following:
  - i) knowledge, understanding and application of this SSD
  - ii) knowledge of the manufacture and supply in the management, operation, installation and maintenance of road tunnels industry, including the methods and techniques sufficient to understand the processes employed and the controls necessary to ensure delivery of conforming product. Typically this would include knowledge of management, operation, installation and maintenance of road tunnels and processes. (Conveyance of this knowledge to auditing teams will be determined by the Certification Body and will be audited by UKAS).
  - iii) maintaining demonstrable technical highway engineering background, capable of reading and understanding specifications and drawings, including knowledge of the Specification for Highway Works and design standards requirements for management, operation, installation and maintenance of road tunnels.
  - iv) is able to demonstrate that they have ongoing suitable health and safety training which shall include appreciation of the risks involved in the manufacture, supply and installation in the parapet restraint systems.
- 3.2. The Certification Body must also ensure that assessors have sufficient knowledge of health & safety requirements related to working on live highways where appropriate, including knowledge of temporary traffic management, working in confined spaces and working at height for assessment of guidance provided on this aspect.

- 3.3 Guidance to Certification Bodies on assessor competence related to this Sector Scheme is given in the Certification Body guidance document – National Highway Sector Scheme Accreditation, Registration and Assessment Guidance for Certification Bodies.
- 3.4 The Certification Body is responsible for ensuring that the assessment teams possess demonstrable expertise in the assessment areas detailed above as they relate to the scope of client activities under assessment.
- 3.5 Minimum assessor qualifications and competence for assessment of this NHSS, which may reside in a single individual or in an assessment team are as follows:
- i) International Register of Certificated Auditors (IRCA) Registered ISO 9001:2000 Lead Auditor qualification or Certification Body equivalent and demonstrable expertise in leading assessment teams.
  - ii) BS EN ISO 9001:2000 assessment experience obtained from assessments of management, operation, installation and maintenance of road tunnels activities in different Organizations, including a minimum of 2 different Organizations in any one assessor on a team assessment.
  - iii) Have technical assessment competence in the categories of management, operation, installation and maintenance of road tunnels].
  - iv) have knowledge, understanding and application of this SSD
  - v) have knowledge of the manufacture and supply in the management, operation, installation and maintenance of road tunnels industry, including the methods and techniques sufficient to understand the processes employed and the controls necessary to ensure delivery of conforming product. Typically this would include knowledge of management, operation, installation and maintenance of road tunnels and processes. (Conveyance of this knowledge to auditing teams will be determined by the Certification Body and will be audited by UKAS).
  - vi) have demonstrable technical highway engineering background, capable of reading and understanding specifications and drawings, including knowledge of the Specification for Highway Works and design standards requirements for management, operation, installation and maintenance of road tunnels.
  - vii) Is able to demonstrate that they have ongoing suitable health and safety training which shall include appreciation of the risks involved in the manufacture, supply and installation in the parapet restraint systems.

#### **4. Conduct of Assessments.**

- 4.1. Certification Bodies shall ensure that an adequate proportion of the initial and continuing assessment duration is devoted to assessing operational activities at sites and locations where management, operation, installation and maintenance of road tunnels covered by the scope of this Sector Scheme are being undertaken.
- 4.2. Certification Bodies shall make every endeavour to ensure that during a three year certification cycle there is evidence of assessment of all execution activities covered by the Organization's scope of registration. Certification bodies shall undertake surveillance visits at intervals of not greater than one year.

#### **5. Format and Content of Registration Certificates.**

- 5.1. Certificates of registration issued by Certification Bodies, which include within the scope of registration reference to compliance with this Sector Scheme, shall be in a format and contain the content detailed in Appendix K of this SSD.

5.2. The National Highway Sector Scheme Logo shall be included in any Certificate of Registration which has this Sector Scheme detailed in the Scope of Registration. The logo shall only be used and applied in the manner detailed in any conditions of use which may be published from time to time.

## **6. National Highway Sector Schemes Schedule of Suppliers.**

6.1. Certification Bodies shall monitor the National Highway Sector Schemes Schedule of Suppliers posted at [www.scheduleofsuppliers.com](http://www.scheduleofsuppliers.com) to ensure equivalence between their clients registered to this Sector Scheme and the listed Organizations.

6.2. Certification Bodies shall provide to National Highway Sector Schemes Schedule of Suppliers administrator at Lantra Awards details of registered Organizations whose scope of registration against this Sector Scheme has ceased to be applicable within 10 working days of that situation occurring.

6.3. Certification Bodies shall audit the Organization to ensure that Lantra Awards have been notified by the Organization of their NHSS registration. (See 4.1(i))

## **7. Reporting on Sector Scheme Performance.**

7.1. Each Certification Body accredited for this Sector Scheme shall provide to the Chairman of the SSACS a summary report which includes as a minimum:

- a) observations and comments on the implementation and assessment findings related to the Sector Scheme including any omissions or deficiencies in its scope.
- b) recommendations for improving/clarifying the SSD
- c) feedback on deficiencies against contract documentation
- d) a list of Organizations whose scope of registration includes this Sector Scheme for comparison against the Schedule of Suppliers

7.2. The report shall be provided at or in the month before each National Highway Sector Scheme Liaison Committee meeting (normally April and October), so that it may be considered during the Group Sessions of the Liaison meeting. This is to be issued to the Chairman of the National Highway Sector Scheme Liaison Committee and the Chairman of this Sector Scheme Committee.

7.3. Certification Bodies shall ensure they are all represented by at least one nominated individual (who will represent all Certification Bodies) at Sector Scheme Advisory Committee. This does not preclude other Certification Bodies from attending, as appropriate.

7.4. Certification Bodies shall be represented at the National Highway Sector Scheme Liaison Committee.

# APPENDIX G1: GUIDANCE TO ASSESSORS' AND OTHER AUDITORS' COMPETENCIES REQUIREMENTS

## General Information

The certification body group (reporting to the Highways Liaison Committee) has proposed that an e-learning programme for assessors based on the information provided by the individual National Highway Sector Scheme Committees should be made available to third party assessors to enable them to have a fuller appreciation of the particular activities involved in highway construction and maintenance. The information contained in this appendix has been collated by the NHSS committee to provide CB assessors with the background information that is considered appropriate for carrying out an assessment against BS EN ISO 9001 and these NHSS documents. During the development of the Appendices it was realised that this information would also provide useful guidance for first and second party auditors of the system. It is hoped that it will be possible in the near future for access to the e-learning programme to be available to all assessors and auditors; information on this development will be made available through revision issues of the relevant NHSS document posted on the UKAS web-site.

## Requirements

In addition to an assessor/auditor having a general appreciation of the requirements and processes required by BS EN ISO 9001:2000, a CB assessor or internal auditor should be aware of the following when completing an audit:

### A General background to the scheme.

- i) The reasons for development of the National Highway Sector Schemes (NHSS) and this scheme in particular, and for CB assessor's examples of where its absence has caused concern/problems

This is normally contained in the introduction to the scheme, in this instance the scheme (NHSS 22) was initially developed with RTOA, HTMA and other interested parties.

- ii) To whom the scheme applies

See Scope in relevant NHSS document i.e. NHSS 22

- iii) Contact details of those that can offer scheme specific assistance

Should be contained in the Organization's quality manual/NHSS documents.

- iv) An overview of the highway infrastructure that the scheme applies to

- v) The range of contracts that the scheme can apply to

See Scope in relevant NHSS document i.e. NHSS 22 (section 1)

- vi) Specific types of works that the scheme applies to

See Scope (section 1) in relevant NHSS document and also Appendix L in NHSS 22; in this instance applies to management, operation, installation and maintenance of road tunnels

- vii) Definitions and terminology that are particular to the scheme

See section 3 of the NHSS

- viii) Diagram of routes to competency of management, supervisors and operatives etc delivering the scheme services

Information/guidance is contained in Appendix C of the document, however the organization's training administrator should have this information available (assessors should also be aware of training and competency assessment requirements available from bodies such as Highway Electrical Academy and Lantra Awards who should be able to assist).

- ix) Overview of important reference documentation applicable to the scheme

Section 2 and Appendix B of the document provides some information.

Knowledge of relevant European and British Standards for management, operation, installation and maintenance of road tunnels, in particular those relating to product conformity, type testing and their requirements. Familiarity with SHW especially Series 7000, 7100, 7200 and 7300, and notes for guidance, including when these are updated.

Relationship with other NHSS and its applicability to this scheme.

## B Summary of where the scheme introduces the interpretation of ISO 9000

4. Quality Management System	Interpretation Y/N	Comment
4.1	Y	
4.2		
4.2.1	N	
4.2.2	Y	
4.2.3	Y	
4.2.4	Y	
5. Management Responsibility		
5.1	N	
5.2	Y	
5.3	Y	
5.4		
5.4.1	N	
5.4.2	Y	
5.5		
5.5.1	N	
5.5.2	N	
5.5.3	N	
5.6		
5.6.1	Y	
5.6.2	N	
5.6.3	N	
6. Resource Management		
6.1	N	
6.2		
6.2.1	N	
6.2.2	Y	See Appendices C,

		and D
6.3	N	
6.4	N	
7. Planning and Product Realization		
7.1	Y	See Appendix A
7.2		
7.2.1	Y	
7.2.2	Y	
7.2.3	N	
7.3	Y	
7.3.1	N	
7.3.2	N	
7.3.3	N	
7.3.4	N	
7.3.5	N	
7.3.6	N	
7.3.7	N	
7.4	Y	
7.4.1	N	
7.4.2	N	
7.4.3	N	
7.5		
7.5.1	Y	
7.5.2	N	
7.5.3	Y	
7.5.4	Y	
7.5.5	Y	
7.6	Y	See Appendix D
8. Measurement, Analysis and Improvement		
8.1	Y	
8.2		
8.2.1	N	
8.2.2	Y	
8.2.3	Y	
8.2.4	Y	
8.3	Y	
8.4	N	
8.5		
8.5.1	Y	
8.5.2	N	
8.5.3	N	

**C**     Overview of management, operation, installation and maintenance of road tunnels

- 1     safe working practices
- 2     operative/supervisor training and qualifications
- 3     maintain equipment
- 4     public protection
- 5     environment

6	testing/inspection/workmanship
7	Health and Safety
8	other

## C1 – Safe Working Practices

Equipment approved and suitable for use

Technicians/operatives to be fully aware of their H&S obligations

- must be able to read and understand their job sheet, risk assessment and communicate effectively
- Method Statements/work procedures
- Risk Assessment
- Induction card/skills card

Vehicles/loads are inspected and drivers are qualified

Site visit including assessment of installation (if possible) and techniques verified.

Awareness of relevant H&S legislation as applicable to management, operation, installation and maintenance of road tunnels.

Aware of current best practice including traffic management measures (including site arrangements).

Correct Personal Protective Equipment Worn

## C2 Training and Qualifications

- Have achieved appropriate training and competency modules/NVQ
- Been inducted on specific equipment (by employer) or if appropriate (i.e. under training) is supervised by a qualified person
- Aware of and understand the relevant requirements of this NHSS
- Aware of and understand the provisions for implementation of training in NHSS 22.
- Been inducted on site specific H&S issues (daily if necessary)

Hold relevant skills card

## C3 Maintain Equipment

- Operative/supervisor is aware of LOLER and PUWER requirements
- Maintenance checklists are available and have been completed on a daily basis

## C4 Public Protection

- Operative/supervisor is aware of need to protect public during installation operations
- Operative/supervisor has been trained to carry out a visual site risk assessment to ensure that the public will not be put at risk during installation/maintenance operations
- Where appropriate operative/supervisor is aware of highway authority Traffic Officer role
- Operatives/supervisors have identification
- The Organization(company) has a complaints procedure in place

*(Note Public in this instance includes personnel employed by the customer/client)*

C5 Environment

Auditors should be sufficiently competent to make general observations on the effectiveness of the Organization's provisions in respect of the environment and in particular management of waste and its reduction.

C6 Testing/Inspection/Workmanship

Auditors should be aware of the importance of testing and inspection of the product.

C7 Health and Safety

Auditors should be aware of the current Health and Safety Legislation and related legislation, such as CDM regulations, as it applies to this sector scheme for the management, operation, installation and maintenance of road tunnels.

## **APPENDIX H: ORGANIZATION ACCEPTANCE AND GUIDELINES FOR NEW ENTRANTS**

### **1.0 Organization Acceptance**

- 1.1 For work carried out on roads managed by the Highways Agency, the National Assembly for Wales, Scottish Executive and DRD (Northern Ireland), only those Organizations holding a valid Certificate of Registration for work within the scope of this SSD will be accepted as complying with Clause 104 and Appendix A of the Specification for Highway Works.
- 1.2 For work carried out on roads managed by other Highway Bodies, acceptance of the Organization will depend on the requirements of the contract.

### **2.0 Guidelines for New Entrants - Requirements**

- 2.1 Organizations must have the required experienced and qualified management, operation, installation and maintenance Operatives and management who meet the requirements of this Sector Scheme. Organizations will need to demonstrate that their equipment and systems meet the requirements of this Sector Scheme.
- 2.2 Organizations must have applied for registration with a certification body that is accredited by UKAS to audit against this Sector Scheme. Organizations will have to demonstrate that they have been audited for office based and site based activities.

### **3 Interim Arrangements for initial Implementation of this sector Scheme**

- 3.1 Organizations may seek registration by a two stage process. The Organization can request validation of their Quality Management System against the sector scheme for initial registration. Within twelve months of this registration Organizations must seek verification of their processes to obtain full registration. That is, the initial auditing will be to validate that the quality management system is in place, and then subsequent auditing will be carried out to verify that the system is in operation. For full registration Organizations will therefore have to demonstrate that they have been audited for office based on-road based and on-site based activities. These interim arrangements will be available after publication of this Scheme on the UKAS website until 1<sup>st</sup> May 2010.
- 4 Membership of a Client or Trade Organization is not a requirement of this Sector Scheme; however, the following associations support this Scheme along with the training and competency routes discussed in Appendix C. Their details are included here for information.
  - Road Tunnel Operators Association
  - Association of Signals, Lighting and other highway Electrical Contractors
  - Highways Term Maintenance Contractors



## APPENDIX J1: FEEDBACK

Any observations or feedback relating to this document or the process described herein may either be

- reported electronically through the Highways Agency's Standards Improvement System (SIS) (Details of SIS are shown in section A below) or
- addressed to the Committee Secretary using the form shown in section B below

### A Standards Improvement System (SIS)

SIS is implemented through Highways Agency Standard GD/03/08 (formerly HD34/03) - The Implementation and Use of Standards Improvement System (DMRB Volume 0 section 2 Part 2 (DMRB 0.2.2) - formerly DMRB Volume 5 Section 3.1 (DMRB 5.3.1)). HD34 was published in November 2003 followed in December 2003 by the launch of SIS; it was republished in May 2008 as GD 03/08.

SIS is the successor to the Quality Control Reporting System (QCRS) - a paper based system, which relied on designers to complete reports and Highways Agency staff to enter them on an old mainframe computer. The difficulty in entering reports and the fact that QCRS was perceived as a means of only recording defects with an emphasis on redress meant that QCRS had fallen into disuse.

The revised system is designed overcomes both of these shortfalls. SIS is simple to use being available to anyone with Internet Access and is aimed at improving standards rather than reporting defects. It also provides a feedback system to the original author to advise him of the actions being taken. (GD03/08 formerly HD 34/03 can be accessed through the Highways Agency web site ([http://www.highways.gov.uk/business/tech\\_info.htm](http://www.highways.gov.uk/business/tech_info.htm)) or directly <http://www.standardsforhighways.co.uk/dmr/vol0/section2.htm> and select part 2)

NOTE: It will be necessary to be authorised to use the system, and in the first instance you are requested to contact the Specifications and Policy Team by email to [standards\\_enquiries@highways.gsi.gov.uk](mailto:standards_enquiries@highways.gsi.gov.uk).

**B - Feedback form**

The Management, Operation. Installation and Maintenance of Road Tunnel Sector Scheme  
Advisory Committee  
c/o UKAS  
21 – 43 High Street  
Feltham  
Middlesex  
TW13 4UN  
Tel: 0208 917 8400  
Fax: 0208 917 8500

Problem Identified:

Suggested Action:

Name:

Organization:

Address:

Contact details:

Date:

## APPENDIX J2: FEEDBACK TO CERTIFICATION BODIES

Feedback relating to certification matters in respect of alleged deficiencies in the product provided under this scheme shall in the first instance be taken up with the Organization. In the event that the matter cannot be satisfactorily resolved written feedback shall be made to the Organization's certification body, detailing the feedback or issue identified. Contact addresses are given in Appendix F.

Feedback / issue Identified:

Organization's Details:

Name:

Address:

Person raising feedback / issue

Name:

Organization:

Address:

Date:

Signed:

## **APPENDIX K: INDUSTRY ACCREDITATION DATE(S) AND THE INTERPRETATION OF CERTIFICATES ISSUED BY CERTIFICATION BODIES**

Certification Bodies (CB) issue Certificates of Registration (CoR) in a variety of styles as suits their particular house style. They may consist of a single CoR containing all the requisite information or the CoR may be a standard certificate with appendices or addendum attached providing the full scope of certification (services) and the location(s) where these services are offered by an Organization. In the latter case, the CoR refers to the relevant appendices or addenda, which form an integral part of the certificate.

A valid National Highway Sector Scheme (NHSS) CoR is only issued by a CB accredited by UKAS against the relevant NHSS (See Appendix F of this document) or by a recognised equivalent accreditation body.

As a minimum a valid CoR will contain the following information:

- The scope of registration including specific registration to BS EN ISO 9001:2000 and this NHSS including the scheme title e.g. National Highway Sector Scheme 22 – Sector Scheme for the Management, Operation, Installation and Maintenance of Road Tunnels.
- The identification of each and every location to which the CoR is applicable.
- The services/product offered by the Organization at each location identified on the CoR for NHSS 22 for the Management, Operation, Installation and Maintenance of Road Tunnels and any applicable categories with associated typical sub-categories where applicable.
- Logos for the NHSS, UKAS (or equivalent) and the CB.
- The name and address(es) of the Organization
- The validity of the certificate (3 years for ISO 9001\*, one year for inspection)
- A unique reference number/code
- The signature of a relevant CB official with his name and title

\*Note where an Organization has an extension to scope to include for this NHSS, the expiry date of the certificate remains as 3 years after their initial assessment/or triennial assessment and not 3 years after obtaining the extension to their certificate i.e. the validity of the certificate will not be reset following their NHSS assessment.

Categories of services offered are

- Road Tunnel Management
- Road Tunnel Operation
- Road Tunnel Maintenance
- Installation of Road Tunnel Equipment

Sub-categories include

- Highway Electrical (Identify as lighting, signing etc)
- Highway Electronic (identify as signals, communications etc)

- Mechanical
- Other to be defined
- Any combination of sub-categories.

(Note: these lists are not exhaustive and the description of the categories and sub-categories may vary.)

#### Notes for Certification Bodies

1. Organizations may be registered for any or all of primary categories, and these shall be referred to on the COR.
2. Secondary/sub-categories shall be listed on the certificate or attached Appendix as appropriate, providing the applicable secondary/sub-categories for each primary category. Where an organization is assessed for all secondary/sub-categories listed in this document, it will only be necessary to include "full" on the certificate against the relevant depot or office.
3. Certification Bodies are reminded that they have a responsibility to notify the Sector Scheme Advisory Committee for Management, Operation, Installation and Maintenance of Road Tunnels of other secondary/sub-categories, should these be identified during an assessment, for consideration by the committee for inclusion of a further secondary/sub-category within the scheme.

The following are example models for the certification.

Figure 1 shows the scope of registration for a generic certificate

Figure 2 shows an example of a generic Appendix.

The italic text in square brackets indicates where specific text would need to be included.

These example models in figures 1 to 2 are for information only and show the information required to be included on any such certificate. They do not imply any specific layout or format nor is it intended to inhibit the house style of Certification Bodies.

**Figure 1 Example Model Certificate of Registration**

*[CERTIFICATION BODY NAME / LOGO]*

**C E R T I F I C A T E   O F   R E G I S T R A T I O N**

*[ORGANIZATION NAME]*  
*[Organization Address]*  
*[Town]*  
*[County]*  
*[Post Code]*

*[Certification Body Name]* issues this certificate to the above named organization after assessing the organization's quality management system and finding it in compliance with

**BS EN ISO 9001:2000 AND NATIONAL HIGHWAY SECTOR  
SCHEME [22]**

For the following scope of registration

- [a) Road Tunnel Management (including health and safety)*
- b) Road Tunnel Operation (including traffic and technical operation)*
- c) Road Tunnel Maintenance (including repair and replacement of equipment)*
- d) Installation of Road Tunnel Equipment]*

National Highways Sector Schemes [22] – Sector Scheme for Management, Operation, Installation and Maintenance of Road Tunnels

Certificate Number:	<i>[Certificate Number]</i>
Issue Date	<i>[date]</i>
Renewal Date	<i>[date]</i>

Signature

*[Name and Title of Certification Body Official]*

*[Certification Body standard footer: Name / Logo / UKAS Logo /  
NHSS Logo etc.]*

**Figure 2 Example Model Appendix to Certificate of Registration**

***[Certification Body Name / Logo]***

**APPENDIX 01**

To Certificate Number      *[Certificate Number]*      Appendix No. *[1]* Page 1 of *[1]*

This Appendix declares the scope of registration of the certificate granted to:

***[ORGANIZATION NAME]***

*[Organization Address]*  
*[Town]*  
*[County]*  
*[Post Code]*

**SCOPE OF REGISTRATION:**

**Installation and maintenance works within or associated with highway / road tunnels :**

- a) Road Tunnel Maintenance (including repair and replacement of equipment)
- b) Installation of Road Tunnel Equipment

National Highways Sector Schemes [22] – Sector Scheme for Management, Operation, Installation and Maintenance of Road Tunnels.

<b><i>Depot, Regional Office etc</i></b>	<b><i>Applicable Sector Scheme(s)</i></b>	<b><i>Scope of Registration</i></b>
<i>[Depot 1 New road, Newtown]</i>		
<i>[Depot 2 Old Road, Oldtown]</i>		

***[Certification Body standard footer: Name/ Logo/ UKAS Logo/NHSS Logo etc.]***

# APPENDIX L: GUIDANCE

## 1 General

It is recommended that Clients acknowledge the requirements of this sector scheme as a contract requirement.

This guidance is primarily of relevance to Clients and their supervisory staff.

Reference should be made to Appendix M before deciding whether to specify that Organizations should be registered to NHSS 22, as registration to other NHSS may include relevant requirements for management, operation, installation and/or maintenance of road tunnels.

The implementation of the Sector Scheme and development of training and competency requirements is intended to provide:

- a) A qualified workforce competent at carrying out management, operation, installation and/or maintenance of road tunnels,
- b) Requirements to evaluate risks and develop processes associated with management, operation, installation and/or maintenance of road tunnels,

and the production of an associated comprehensive quality plan for each contract.

*[During the introductory period for this Sector Scheme, Clients may take into consideration in the quality assessment of an Organization's tender, their commitment to compliance with this Sector Scheme. This may be demonstrated through the extent to which the Organization has introduced a qualified skilled workforce for undertaking the management, operation, installation and/or maintenance of road tunnels].*

It is necessary for the Client to ensure that all those involved in carrying out the management, operation installation and/or maintenance of road tunnels are appropriately trained and skilled, whether or not they are directly employed. The training and assessment of competency schemes described in this SSD are designed to cater for the range of skills within the overall process of the management, operation, installation and/or maintenance of road tunnels

Clients and Customers that require confirmation of compliance with the Contract Specification in respect of the supply of services, products or materials should confirm that the quality management system certificate issuer is accredited by UKAS or equivalent and that specific reference is made to relevant Sector Schemes on certificates.

For the Sector Scheme to achieve its objectives it is essential that Clients, either directly or via the agents and individuals they employ, ensure that the requirements of this document are complied with. This includes ensuring that sub-contractors employed directly or indirectly, are registered to the Sector Scheme. Supervisory staff must be instructed to carry out spot checks of identification cards.

Lantra Awards have established and manage a schedule of registered companies that have been registered to National Highways Sector Schemes; free access to the schedule is obtained by logging on to the Lantra Awards website [www.scheduleofsuppliers.com](http://www.scheduleofsuppliers.com). However, it should be noted that only those companies that confirm entry onto the schedule to Lantra Awards are listed. The list of all registered suppliers is held by Lantra Awards (if notified); Clients should contact Lantra Awards by email at [NHSSscheduleofsuppliers@lantra.co.uk](mailto:NHSSscheduleofsuppliers@lantra.co.uk) to ascertain/check the status of company if it is not listed on the schedule.

## 2 Road Death Investigation

Attention is drawn to the ACPO Road Death Investigation Manual, which indicates that in the advent of a collision or other road incident particularly one where there has been a fatality, the police may ask the relevant Highway Bodies to provide information on the state of the road.

In respect of this National Highway Sector Scheme information that is likely to be sought includes the following:

- a) High level general policy statements
- b) Specific local maintenance policies and standards
- c) Authority procedures
- d) Works records including the results of any test carried out
- e) The quality of systems for traffic management
- f) Skidding resistance testing

An Authority may be required to present data to the Police at short notice in case of a fatality on the network. It should ensure that it has, or can obtain, the relevant information from the Contractor.

### **3 NHSS 22 Applicability to Clients**

The Sector Scheme document is designed to be used by all persons engaged in management, operation, installation and/or maintenance work within or associated with road tunnels. It is intended to be used by supervisors, control room staff, managers and inspectors who require as a minimum an awareness of the principles associated with the work that they are involved.

### **4 Role of Responsible Manager, Authorising Officer, Qualified Supervisor**

The Sector Scheme and Road Tunnel Industry Scheme for the Registration of Authorised Persons have no defined role for the Qualified Supervisor, although their role and responsibilities are defined within the delivery of the Qualified Supervisor Courses. These guidelines provide information on the role of the Qualified Supervisor and the work required of them in the Competency Assessment process. They also provide guidance on the role of the Responsible Manager, Authorising Officer and Compliance Manager.

The competency requirements of the Sector Scheme are based on the principle that an Organization must ensure that its employees are competent to carry out the work that is issued to them. This is a fundamental requirement of Health and Safety legislation and the Sector Scheme reflects this in requiring an Organization to use one of its own employees to act as the Qualified Supervisor and take on the responsibility for gathering and presenting evidence to indicate the scope of competence of the employees to whom work is issued.

The Authorising Officer need not be an employee of the Organization because his role is one of validating the evidence presented to him. The Responsible Manager must be an employee of the Organization and takes overall responsibility for the competency assessment process. The Compliance Manager is defined in the Sector Scheme as having responsibility for the development, review and continuous improvement of policies and procedures. As a defined role the Compliance Manager has no direct involvement in the assessment of competence but the Sector Scheme allows this role to be carried out by the Responsible Manager, Authorising Officer or Qualified Supervisor.

Specific guidelines for the role of the Qualified Supervisor are as follows:

- a. The Qualified Supervisor is the person in the Organization who should know the ability and competence of each employee under their supervision. They shall oversee the gathering of evidence, the preparation of portfolios and the submission of the portfolios to the Authorising Officer for the desk-top and/or on site assessment of competence.
- b. The Qualified Supervisor must attend a Road Tunnel Industry Qualified Supervisors Course.
- c. For Organizations with one or two employees, they need not have a Qualified Supervisor. They will still need to have an Authorising Officer, which they can obtain from another Organization such as their main client
- d. For Organizations employing 3 to 5 people they need not directly employ a Qualified Supervisor but can use the services of a Qualified Supervisor employed by another Organization.
- e. For Organizations who employ more than 5 people they:
  - i. Must use an employee of the Organization to carry out the role of the Qualified Supervisor.

- ii. Do not have to use their Qualified Supervisor to directly build portfolios and gather evidence but the Qualified Supervisor must oversee this process and sign off each piece of evidence and take ownership for it for those employees that are under his supervision. It is the responsibility of the Qualified Supervisor to ensure that the person(s) used to gather the evidence is / are competent to carry out this function. The Organization must have suitable internal procedures detailing this process and it is expected that the Organization would retain on file the details (e.g. CV etc.) of the person(s) used to gather the evidence. In particular there shall be an internal verification system where the Qualified Supervisor sample-audits the on site evidence gathering process. The suggested sample is 10%.
- iii. Cannot use a Qualified Supervisor from another Organization to carry out the role of the Qualified Supervisor.

Highway Bodies, Clients and Consultants having one or two employees shall be treated as Organizations having one or two employees as above. Local Authority Clients and Consultants having more than two employees shall be treated as Organizations having 3 to 5 employees as above irrespective of the number of employees

Manufacturers and Product Suppliers having one or two employees falling within the categories of Approved Persons shall be treated as Organizations having one or two employees as above. Manufacturers and Product Suppliers having more than two employees falling within the categories of Approved Persons shall be treated as Organizations having 3 to 5 employees as above irrespective of the number of employees

Organizations can submit applications for the registration of Authorised Persons without a Qualified Supervisor having attended the Qualified Supervisor course subject to:

- a. A Qualified Supervisor being nominated by the Organization and
- b. The Qualified Supervisor being registered on a Qualified Supervisor course.

Applications received in this way shall be subject to the nominated Qualified Supervisor successfully completing the Qualified Supervisor course.

Another Qualified Supervisor or an Authorising Officer can validate the evidence of a Qualified Supervisor for registration purposes.

The Authorising Officer(s) and the Qualified Supervisor(s) must be Registered Authorised Persons in accordance with the Road Tunnel Industry Scheme for the Registration of Authorised Persons.

## **5 Registration of employees transferred under the Transfer of Undertakings (Protection of Employment) Regulations or recruited from another Organization**

Employees registered under the TUPE Regulations or recruited from another Organization are to be considered as new employees in respect of re-assessment and re-registration as specified in clause 6.2.2(v) of this SSD. The original route to registration of the employee may be maintained (e.g. if registered originally under Industry Accreditation, this route may be kept after the employee has transferred, providing the original timescale of 10 years from the first date of registration to gaining the NVQ/SVQ has not been exceeded). This timescale would remain as at the first date of registration and would not "start again" on re-registration of the transferred employee.

## **6 Registration Cards**

For details on the types of Road Tunnel Industry Registration Cards, reference should be made to the Road Tunnel Industry Scheme for the Registration of Authorised Persons Handbook. In particular it should be noted that interim Road Tunnel Industry Registration Cards are available for appropriate employees, which are then replaced with standard Road Tunnel Industry Registration Cards.

## **APPENDIX M: GUIDANCE FOR ORGANIZATIONS REGISTERED TO ANOTHER NHSS**

Registration to NHSS 22 means that registration to other NHSS Industry schemes is not required and vice versa for those areas of competency and training where there is clear equivalence. However, employees registered under other Industry Schemes will have to undergo induction training specific to the tunnel(s) and equipment and processes therein where they are intending to carry out works.

- i) Reference should be made to [www.ukas.com](http://www.ukas.com) for other NHSS which may be applicable