



# National Highways Sector Schemes for Quality Management in Highway Works

22

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

PUBLISHED BY THE SECTOR SCHEME ADVISORY COMMITTEE FOR  
MANAGEMENT, OPERATION, INSTALLATION AND MAINTENANCE OF ROAD TUNNELS

# DOCUMENT CONTROL

## Issue Statement

Issue Number	Comments
Issue 1 to UKAS	August 2008
Issue 2 to UKAS	August 2010 Review following November 2009 NHSS 22 Meeting to focus on activities other than equipment installation and / or maintenance and align with <sup>(06/10)</sup> NHSS 0.

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# COMPOSITION OF THE SECTOR SCHEME ADVISORY COMMITTEE, EXCLUSION OF LIABILITY AND SELECTION OF CERTIFICATION BODY

## COMPOSITION OF SECTOR SCHEME ADVISORY COMMITTEE

### a) FULL MEMBERS

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)
Transport for London	(TFL)
Welsh Assembly Government	(WAG)

### b) CORRESPONDING MEMBERS

Association of Directors of Environment, Economy, Planning and Transport	(ADEPT)
British Tunnelling Society	(BTS)
Civil Engineering Contractors Association	(CECA)
Department for Transport	(DFT)
Department of Regional Development (Northern Ireland)	(DRD(NI))
Fire & Rescue Service	(FRS)
Health and Safety Executive	(HSE)
Highways and Construction Training Association	(HCTA)
Major Contractors Group	(MCG)
National Standards Authority of Ireland	(NSAI)
SCOTS	(SCOTS)
Scottish Government (Transport Scotland)	(TS)
SURVIVE	(SURVIVE)
Technical Advisory Group	(TAG)
United Kingdom Accreditation Service	(UKAS)

## **EXCLUSION OF LIABILITY**

The Sector Scheme Advisory Committee for NHSS 22

- 1 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 the subject of such assessment,
- 2 do not provide any representation or warranty as to any aspect of any such system, product or service, and
- 3 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 any such liability or responsibility attaching exclusively to the producer (or user as the case may be) 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 (CB) as described in Appendix G (clause 3.1).

Prospective companies seeking registration under this scheme should ensure that they engage a Certification Body specifically accredited to assess against the requirements of this SSD. Specifiers, consultants, engineers etc. that require confirmation of compliance with the Contract Specification in respect of the supply of products/materials should confirm the current status of the quality management system certificate issuer and that specific reference is made to this Sector Scheme on the Certificate of Registration (See Appendix K).

## **IMPLEMENTATION**

### **ISSUE UKAS 1**

This scheme introduces requirements for the management, operation, installation and maintenance of road tunnels.

The Sector Scheme Advisory committee agreed with relevant trade associations and Certification Bodies that an introductory period for implementing this scheme was appropriate and concluded that this period operated 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 included in Appendix A of the Specification for Highway Works (SHW) as a mandatory requirement for suppliers contracted to the Highways Agency where the SHW is a contractual document. Separately the document will be called up in specific contracts as necessary.

This deferral in implementation intended to allow new applicant companies and certification/inspection bodies sufficient time to comply with the interpretation given in this document. It is also proposed that a transitional period of twelve months from the date of availability (by UKAS) will be provided to companies who have obtained registration to BS EN ISO 9001.

CBs have been able to issue Certificates of Registration since 1<sup>st</sup> November 2008. It is advisable for Organizations to contact their CB to confirm that the CB has, or is intending to achieve, accreditation for this Sector scheme and establish the route for registration.

Appendix H provides guidance on the interim arrangements for initial registration to this Sector Scheme during the introductory period.

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.

## **ISSUE UKAS 2**

- (i) This issue of the SSD is to be implemented immediately from the date of publication on the UKAS website for assessments in accordance with BS EN ISO 9001 latest issue.
- (ii) Assessments against the previous issue will continue to be valid until the following assessment carried out by the accredited Certification Body.
- [(iii) Implementation requirements described in the previous issue will continue to apply

Note 1: Following publication of the document the organization should implement the changes in time for their surveillance visit or assessment visit by the Certification Body.

Note 2: The Certification Body should assess the organization against the latest edition of the scheme within 14 months of its publication.

Note 3: Where the surveillance/assessment visit of an organization occurs within two months of the publication of a revision, such assessment maybe undertaken against the previous edition subject to compliance with Note 2 above.

## INTRODUCTION

- 1 This Sector Scheme Document (SSD) relates to the quality management system requirements for the Management, Operation, Installation and Maintenance of Road Tunnels. It sets out to identify a common interpretation of BS EN ISO 9001 for Organizations and Certification Bodies engaged in the sector, and the minimum qualifications that an assessor/auditor requires. The document shall be read in conjunction with BS EN ISO 9001.
- 2 This Sector Scheme is one of the series of National Highway Sector Schemes (NHSSs), which have been developed as bespoke integrated management schemes within an ISO 9001 framework to interpret BS EN ISO 9001 as it applies to a particular highway related activity/industry within the United Kingdom.
- 3 Separate Sector Scheme Advisory Committees (SSACs) for each activity within the sector provide advice to UKAS and expert representation is drawn from all sides of industry. Each SSAC has interpreted BS EN ISO 9001 in relation to the requirements of their particular activity and has come to a consensus on the minimum levels of workmanship, services, products, testing, and the training and competency of personnel, as appropriate, required to meet specification requirements as well as identified requirements in respect of environmental and health & safety and other aspects. The details are contained in the individual Sector Scheme Documents (SSDs). Following the publication of a revised BS EN ISO 9001, the committees will review their documents to ensure alignment with the revised BS EN ISO 9001 to ensure that the SSD do not conflict with the national standard prior to withdrawal of the previous edition of the standard.
- 4 The individual NHSS technical advisory committees are overseen by the National Highways Sector Scheme Liaison Committee (NHSSLC). This Committee 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 NHSS technical advisory committees. It is also the venue where dialogue with UKAS and the Certification Bodies on the application of the Sector Schemes takes place.
- 5 NHSSs together with BS EN ISO 9001 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 Organization
  - Provide and maintain a properly trained and competent workforce
  - Involve all sides of industry in scheme ownership within a partnership framework
  - Provide the basis for the technical knowledge and experience that Certification Body auditors will use in the sector concerned
  - Promote confidence in quality management systems through provision of a robust transparent system
- 6 The Sector Scheme shall apply only where specified by the Client in their Contract Documents for the Management, Operation, Installation and Maintenance of Road Tunnels
- 7 In using this Sector Scheme users shall use best practice such as specifying any other relevant NHSSs as appropriate to the nature of the work being undertaken.
- 8 It should also be noted that NHSSs are mandatory for Highways Agency contracts and suppliers within the supply chain shall demonstrate compliance with the requirements of BS EN ISO 9001 and this SSD as part of their continual improvement within their BS EN ISO 9001 registration. It is anticipated that other highway authorities that use the Specification for Highway Works as the basic document for procuring highway works will also require

compliance with BS EN ISO 9001 and this SSD. Other owners of transportation infrastructure may also require their suppliers to comply with this Sector Scheme, as may other authorities e.g. ODA.

- 9 Where traffic management is required companies should either employ a National Highway Sector Scheme approved company or where applicable have skilled registered traffic management operatives qualified to meet the requirements of NHSS12D relevant to contract requirements and risk assessments. For work carried out on high speed dual carriageways and motorways the Organization installing Temporary Traffic Management measures should always be registered to NHSS 12A/B and/or 12C.
- 10 The SSD is a live document with the NHSS 22 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. The SSD may be obtained
- by contacting any relevant Certification Body.
  - by contacting UKAS at the address below
  - by visiting the UKAS website ([www.ukas.com](http://www.ukas.com)) from where the document can be freely downloaded or.

Note: Information on relevant Certification Bodies may be obtained from the UKAS website by following the instructions given in Appendix F.

- 11 The Secretary of the NHSS 22 Advisory Committee may maintain a list of registered Organizations. The Secretary can be contacted at the address given below.
- 12 Lantra Awards maintains a list of registered Organizations for the NHSS Liaison Committee; details can be accessed from [www.scheduleofsuppliers.com](http://www.scheduleofsuppliers.com). Organizations are required to notify the Schedule of Suppliers management team (See Clause 4.1) on an annual basis, which is monitored during the Certification Body assessment. An application form is provided at Appendix O of this document which should be copied and submitted to the Schedule of Suppliers Management team together with the annual registration fee following confirmation of registration to this NHSS.

Note The cost of managing the website is defrayed by a small annual charge. Lantra Awards Schedule of Suppliers Management Team may be contacted by email at [scheduleofsuppliers@lantra-awards.co.uk](mailto:scheduleofsuppliers@lantra-awards.co.uk) to ascertain/check the status of an organization/company if it is not listed on the web-site.

13 Scheme Contact and Feedback

a) Contact

The Secretary  
NHSS 22 - SSAC  
c/o UKAS  
21 – 43 High Street  
Feltham  
Middlesex, TW13 4UN

Tel. 0208 917 8400  
Fax. 0208 917 8500

b) Feedback

Any feedback relating to this SSD should be provided in accordance with the procedures detailed in Appendices J1 to J3.

## **INTERPRETATION OF BS EN ISO 9001:2008**

### **1. SCOPE**

This SSD together with BS EN ISO 9001 describes the quality management system requirements to be established by Organizations providing the management, operation, installation and maintenance of road tunnels.

The document interprets the requirements of British Standard BS EN ISO 9001:2008 and should be read in conjunction with that standard. The SSD is applicable to Organizations carrying out, 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 and information systems, 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
- 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 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, DEFINITIONS AND ABBREVIATIONS**

3.1 For the purpose of this Sector Scheme Document the following terms and definitions shall apply:

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 this SSD
Client:	The body for which the work is being carried out e.g. Highway Authority.

Certificate of Registration:	A certificate issued by a UKAS accredited Certification Body certifying that the holder operates a Quality Management System complying with BS EN ISO 9001:2008 and this SSD. The Certificate will state the category (ies) of work that the holder is competent to supply.
	Note The Certificate of Registration must identify the NHSS(s) by number as well as by category and sub-category
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.
Contract Specification:	<p>i) Manual of Contract Documents for Highway Works: Volume 1: The Specification for Highway Works (Department for Transport) or as specifically required in the contract documents.</p> <p>ii) Contract Specific Appendices</p> <p>iii) The Contract Drawings</p>
Customer:	The body engaging the Organization for the purpose of the work described in this SSD.
Designer	The person / body responsible for identifying requirements and converting requirements into design outputs in the form of, but not limited to: drawings, specifications, plans, instructions.
Diplomas:	These are qualifications developed through the qualification framework and will supersede NVQs when they are up for revision. See Appendix C <i>[Insert number]</i>
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.
National Vocational Qualification (NVQ)	– a vocational qualification approved by the Qualification Curriculum Authority.
Operation and Maintenance Manual	Documents that contain 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.

Organization	The body responsible for the provision of the product or service.
Organization's Manager(s)	The person(s) named in the Organization's Quality Plan as having managerial responsibility for the management, operation, installation and maintenance of road tunnel.
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).
Quality Plan	The document setting out the specific quality practices, resources and sequence of activities relevant to the project (See Appendix A).
Quality Management System	The Organization's structure, responsibilities, procedures, processes and resources for implementing Quality Management.
"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 terminology used in ISO 9001 and ISO 9004".)
Scottish Vocational Qualification (SVQ)	- a vocational qualification approved by the Scottish Qualification Authority.
Responsible Manager	The person named in the Organization's Quality Plan as having managerial responsibility for activities set out in the scope.
Safety Documentation	Documentation compiled pursuant to Annex II, Section 2 of the Road Tunnel Safety Regulation 2007.
Technical Control Room Operative	The person responsible for monitoring tunnel plant and control system faults and operating control of the tunnel.
Technical Control Room Supervisor	The person responsible for supervising Technical Control Room Operatives.
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	The person with overall responsibility for matters relating to administration, operation and maintenance of tunnels, and, in certain cases, parts of the adjacent road network, as defined by Regulation 8 of the Road Tunnel Safety Regulations 2007

Tunnel Safety Officer

The person responsible for tunnel safety as defined by 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

3.2 For the purpose of this Sector Scheme Document the following abbreviations shall apply:

CB	Certification Body
CSCS	Construction Skills Certification Scheme
NHSS	National Highways Sector Scheme
SSAC	Sector Scheme Advisory Committee
SSD	Sector Scheme Document
UKAS	United Kingdom Accreditation Service or any equivalent International Accreditation Forum (IAF) Multi-Lateral Agreement (MLA) signatory with a scope which includes this sector scheme.

Note: The terms and definitions given in ISO 9000 remain applicable.

## QUALITY MANAGEMENT SYSTEM REQUIREMENTS

Paragraph numbers in sections 4 to 8 below refer to the relevant paragraph numbers in BS EN ISO 9001. Where the term "No specific interpretation" is used in this SSD the requirements are as stated in BS EN ISO 9001 without further qualification.

The interpretations given below are to assist in the clarification of the ISO 9000 text for the relevant activity, no inference should be made that ISO 9001 requirements are diluted or deleted because of this interpretation.

### 4 Quality management system

#### 4.1 General requirements

The Organization shall operate a quality management system to BS EN ISO 9001: 2008 and this schedule.

The organization shall notify and provide evidence of their Certificate of Registration to this scheme to the Schedule of Suppliers via Lantra Awards (Lantra House, Stoneleigh Park, Kenilworth, Nr Coventry, CV8 2LG) immediately following confirmation from the Certification Body and thereafter annually in April. In addition the organization shall provide details of a focal point for the organization including their title / position at the time of notification.

An application form is given in Appendix O of this document; this may be copied for submission to the Schedule of Suppliers Management Team at Lantra House.

#### 4.2 Documentation requirements

##### 4.2.1 General

- (i) Quality Plans shall be required for all contracts. When specified in the contract documents or requested, 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 (See Appendix A).

The relevant Quality Plan and standard operating procedures shall be available to operatives and shall be read and signed by each operative.

#### 4.2.2 Quality manual

No specific interpretation

#### 4.2.3 Control of documents

- (i) As part of the Organization's procedures for document control, the following documents are typically required to be controlled, this shall include, but not be limited to, as applicable

Contract specific documents e.g. drawings, schedules, as listed in the Quality Plan.

- 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 Emergency Plans
- l Compliance, Management, Operation, Installation, Maintenance and Safety Reports
- m Calibration and maintenance records.

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.

- (ii) The Organization shall have procedures in place to ensure that the latest versions of relevant Standards and Documents are always available (See Appendix B)
- (iii) The Organization shall keep all records after completion as required by the terms of the Contract or for a minimum of six years whichever is the longer. Record disposition after this period shall be defined in the Quality Plan.

#### 4.2.4 Control of records

- (i) In addition to the Organization's own quality records, the following records shall typically be kept:

Contract specific records, e.g. risk assessments, as listed in the Quality Plan.

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 Emergency Plans
- l Compliance, Management, Operation, Installation, Maintenance and Safety Reports
- m Calibration and maintenance records.

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.

- (ii) The Organization shall keep all records after completion as required by the terms of the Contract or for a minimum of six years whichever 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**

- (i) Processes for determining customer requirements shall consider the interests of the Client and the product end users, i.e. the general public/travelling public and shall be mindful of the Client's interaction with the end users. This will 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 NHSS.

### **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 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

- (i) Organization shall review the quality management system at least once a year, or on occasions when a significant change in the Contract Specification takes place to ensure its continuing suitability and effectiveness to conform to this NHSS.

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

The training and assessment of operatives required by this scheme is aimed primarily at technical competence for the management, operation, installation and maintenance of road tunnel operatives. It is 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 systems of work.

6.2.2 Competence, awareness and training

- (i) Management Resources, Responsibilities and Qualifications

The Organization shall appoint persons to undertake the following roles as appropriate. Guidance on roles and responsibilities is provided in Appendix L.

1. Authorising Officer(s)
2. Compliance Manager(s)
3. Responsible Manager(s)
4. Technical Control Room Operator(s)
5. Technical Control Room Supervisor(s)

A Person may have more than one function however an Authorising Officer cannot be the Responsible Manager for a given employee.

(ii) Quality System Familiarisation, Training 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

- 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 this SSD.
- 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 relevant third party audits.

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

(iii) Employee Register

The Organization shall record their Authorised Persons.

(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 appropriate to the activity, not exceeding 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 an Authorised Person who has been authorised at the appropriate level of competence.

### 6.3 Infrastructure

No specific interpretation.

## 6.4 Work environment

No specific interpretation.

## 7 Planning and product realization

### 7.1 Planning of product realization

- (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, Environmental Plan, Sustainability Plan, the Health and Safety Plan, Risk Management etc together. Management of the service as a whole is reliant on quality and hence the contract and the quality element cannot be separated, as one cannot function without the other.
- (iv) NOTE: - The Quality Plan describes the management strategy that sets clear and sustainable performance objectives, delegates' responsibility and establishes lines of communication. The objective being to manage the various management schemes within an overall management scheme within an organization.
- (v) The Organization shall, in order to reduce the need for waste disposal, minimise the generation and environmental impacts of wastes arising during the contracted works and shall maximise opportunities for the re-use and recovery of wastes. The Organization shall document its arrangements for the identification, segregation, handling, storage and disposal of the different types of wastes arising from the contracted works.

### 7.2 Customer related processes

#### 7.2.1 Determination of Requirements Related 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 processes for review and determination of requirements shall require the Organization to verify with the Customer that the order placed meets the technical requirements included in the 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.

#### 7.2.3 Customer communication

- (i) The Organization shall have a process in place to notify Lantra Awards of its registration status in respect of this NHSS, within 14 days of gaining registration to this scheme and thereafter annually in April.
- (ii) “The Customer needs to be informed about the products, that is, they require detailed information as appropriate regarding materials, components, manufacturing details etc. for the purposes of:
  - (a) as-built records for maintenance/health and safety requirements.
  - (b) For their own monitoring of the effectiveness/performance of the product.

The Quality Plan shall identify what and when relevant information is passed on to the customer or their agent.”

The SSAC shall define the relevant information e.g. contract or legislative requirement such as CDM regulation requirements.

### 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.

#### 7.3.1 Design and development planning

No specific interpretation

#### 7.3.2 Design and development inputs

No specific interpretation

#### 7.3.3 Design and development outputs

No specific interpretation

#### 7.3.4 Design and development review

No specific interpretation

#### 7.3.5 Design and development verification

No specific interpretation

7.3.6 Design and development validation

No specific interpretation

7.3.7 Control of design and development changes

No specific interpretation

**7.4 Purchasing**

The Organization shall establish procedures to ensure that supplies of services and materials are obtained from a list of approved suppliers which should include registration to relevant NHSS's.

7.4.1 Purchasing process

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.

7.4.2 Purchasing information

No specific interpretation

7.4.3 Verification of purchased product

No specific interpretation

**7.5 Production and service provision**

7.5.1 Control of production and service provision

The Organization shall identify and plan the supply and installation processes. Examples of conditions, which shall be controlled, include:

a) an agreed procedure for carrying out emergency repairs including health and safety requirements.

b) when the Organization is the main contractor, location and identification of underground and over ground services and structures including installed systems together with the names, addresses and telephone numbers of persons responsible for them.

c) when the Organization is a sub-contractor, the taking of all reasonable steps to ensure this information is available from the main contractor and is suitable to the extent that the Organization is satisfied it is safe to carry out the sub-contract works.

d) access to and a working knowledge of the relevant documents listed in Appendix B of this schedule together with the Contract Specification.

e) any special instructions relating to the service and programme of activities is documented and issued to all relevant personnel.

#### 7.5.2 Validation of processes for production and service provision

Works orders, risk assessment and quality plans for the management, operation, installation and maintenance of NHSS 22 shall be signed by the Registered Lead NHSS 22 Operative or Technical Officer and retained for 6 years. They will also be submitted to the Client if requested.

#### 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 where materials are supplied by the Customer or the Client.

#### 7.5.5 Preservation of product

Systems shall be in place to inspect and maintain all goods returned from site before their subsequent use.

When appropriate to the contract, storage arrangements and delivery programme for all materials shall be stated in the Quality Plan.

Systems shall be in place to ensure goods returned to stock are placed at the correct location in the materials storage area.

### 7.6 Control of monitoring and measuring devices

The Organization's system shall include documented procedures to demonstrate the manner and frequency of the calibration of the measuring and test equipment. (See Appendix E for guidance.)

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 for guidance).

## 8 Measurement, analysis and improvement

### 8.1 General

Inspection, monitoring and appropriate testing shall be undertaken to demonstrate adherence to the Contract Specification and to meet the operational needs of the tunnel.

### 8.2 Monitoring and measurement

#### 8.2.1 Customer satisfaction

No specific interpretation.

#### 8.2.2 Internal audits

Internal audits shall be carried out at sufficient frequency and by a suitable technically competent person/s to ensure a robust assessment of the compliance of the product. The quality plan shall state the frequency of internal audits. Internal audits of the quality management system against this SSD shall include at least two visits a year to specific works sites to check NHSS 22 activities. (Where the organization does not have contracts

which provide continuous working throughout a full year, visits shall be conducted on a pro-rata basis, but at least one visit per contract must be made). Internal auditors shall have a working knowledge of NHSS 22 activities. Internal audits shall be carried out by the nominated quality manager.

Internal audits shall be carried out 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 NHSS 22 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

No specific interpretation

### 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.

“Any material and /or work not conforming to the specification shall either be reworked to conform to the specification or must formally be accepted in writing by the customer. The materials and/or work shall otherwise be considered as rejected and precluded from use as originally intended.”

### 8.4 Analysis of data

Analysis of data relating to road traffic incidents, fires and any major incident and /or any significant failure of the quality management system that may result in injury or damage shall be undertaken and reported to the client.

### 8.5 Improvement

No specific interpretation

#### 8.5.1 Continual improvement

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

#### 8.5.2 Corrective action

No specific interpretation.

#### 8.5.3 Preventive action

No specific interpretation.

## **APPENDIX A: REQUIREMENTS FOR QUALITY PLANS**

The Quality Plan shall include the following items as a minimum.

### **1.0 General requirements**

- 1.1 Definition of the product (or service) to be provided.
- 1.2 The structure of the Organization describing the line of command and stating the names of the Organization's Manager responsible for the contracted work.
- 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 team selection including special requirements for skilled personnel e.g. training of site staff.
- 1.5 The control of equipment.
- 1.6 Any environmental conditions impacting upon the specified works.
- 1.7 Location of site for the contract and means of access
- 1.8 Specification and/or Contract Documents
- 1.9 Extent of the works and the commencement and completion dates of the contract
- 1.10 Details of the work (as appropriate)
- 1.11 Details of existing materials (as applicable)
- 1.12 Disposition of records

### **2.0 Contract specific information**

- 2.1.1 The Customer's nominated Quality Manager, project manager and/or other representatives through whom communication is to be made throughout the contract.
- 2.1.2 Names of the staff involved with the contract including the NHSS 22 qualified operatives. 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.
- 2.6 Liaison with the Police and the Highway Authority or other competent authority.
- 2.7 Materials storage details and location

- 2.8 Method statements for application/installation, maintenance and removal of tunnel plant, equipment and systems, and the detailed drawing(s) to be supplied.
- 2.9 Inspection and testing regime to be adopted covering frequency, methods of test, responsibility for testing and acceptance criteria.
- 2.10 Control of non-conforming product.
- 2.11 How performance requirements are to be achieved.
- 2.12 All relevant contract specific information in respect to speed restrictions, safety requirements, environmental requirements, existing conditions and site conditions.
- 2.13 Any client-specified testing requirements and responsibility for testing including the supply of test equipment.

*NOTES:*

- 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.
- 2. The Organization should also be aware that there may be further general requirements for quality plans within a contract, for instance Appendix 1/24 of the Manual of Contract Documents for Highway Works, which may also need to be addressed.

## APPENDIX B: REFERENCE AND ASSOCIATED DOCUMENTS (BIBLIOGRAPHY)

NOTE: - 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 of and access to all the documents including amendments unless stated otherwise in the specification

Organizations shall ensure they are working to current reference or associated documents appropriate to work in their sector.

- 1 Manual of Contract Documents for Highway Works: Volume 1 Specification for Highway Works (SHW), and amendments
- 2 Manual of Contract Documents for Highway Works - Volume 2 Notes for Guidance on the Specification for Highway Works (NGSHW), and amendments.
- 3 Manual of Contract Documents for Highway Works - Volume 3 Highway Construction details, and amendments.
- 4 Manual of Contract Documents for Highway Works - Volume 5 Contract Documents for Specialist Activities, and amendments.
- 5 Manual of Contract Documents for Highway Works - Volume 6 Departmental Standards and Advice Notes on Contract Documentation and Site Supervision, and amendments. Contract Documents for Specialist Activities, and amendments.
- 6 BS EN ISO 9000 (latest issue) - Quality Management Systems – Fundamentals and Vocabulary
- 7 BS EN ISO 9001 (latest issue) - Quality Management System – Requirements
- 8 ISO 9004 (latest issue) - Quality Management Systems – Guidelines for Performance Improvements
- 9 ADR Directive 2007 (Issue 6) and amendments.
- 10 The Design Manual for Roads and Bridges (<http://www.highways.gov.uk/business/238.aspx>)
- 11 The Road Tunnel Safety Regulations 2007 and amendments.
- 12 Regulatory Reform (Fire Safety) Order 2005
- 13 The Road Tunnels Industry Registration Scheme Handbook for National Highways Sector Scheme 22.
- 14 GD02 Quality Management Systems for Highway Design (DMRB 0.2.1) [www.tso.co.uk](http://www.tso.co.uk)  
<http://www.standardsforhighways.co.uk/dmr/vol0/section2/gd0208.pdf>
- 15 PIARC Technical Committee Road Tunnel Reports
- 16 Interim Advice Notes (IANs)
- 17 Network Management Manual (NMM)
- 18 Routine & Winter Service Code (RWSC)

19 The Traffic Systems & Signaling Registry (tss Plans Registry)

NOTE: This list of standards and documents include those that are date specific, however, the Organization shall have procedures in place to ensure that the latest versions are always available. (See clause 4.2.3).

## APPENDIX C: TRAINING AND HEALTH AND SAFETY FOR NHSS 22 OPERATIVES/EMPLOYEES

The Organization shall ensure that their Operatives/employees shall have undergone suitable training that will cover aspects of the work to be undertaken as follows:

### 1. Qualifications and Credit Framework

The Qualifications and Credit Framework (QCF), which will ultimately replace the National Qualifications Framework (NQF), will be an operational pilot from 01/08/08.

Awarding Bodies should be actively involved in the process of beginning to identify and align several Sector Skills Councils' (SSCs) priorities with the needs of their centres and providers. The aim should be to ensure that only Qualifications fit for purpose will be developed and that they continue to work pro-actively with their industry partners to meet the needs of employers and employees in all areas of training provision.

#### 1.1 What is the QCF?

The QCF is designed to be a simple and flexible system that will operate across England, Wales and Northern Ireland and will closely align with the Scottish Credit and Qualifications Framework. It will recognise achievement of learners from aged 14 – 90 and supports a national record of learner achievement enabling movement between centres and Awarding Bodies if appropriate.

#### 1.2 Features:

All units within the framework will have a title, credit value, level, and a set of explicit learning outcomes and assessment criteria. Each unit should stand alone and be capable of independent assessment. Units will be the building blocks of qualifications and all qualifications will be described through agreed rules of combination.

There will be a standardised simple architecture to describe qualifications represented by size and level – from Entry level through to level 8. Qualifications will be identified as:

Awards (1-12 credits),  
Certificates (13-36 credits) and  
Diplomas (37+).

The aim is that all achievements can be standardised by a common currency which is “credit” and that the level and size of achievements should be standardised and easy to recognise. Credit can be accumulated and transferred and used flexibly to meet a variety of learner needs. One credit will represent 10 notional learning hours.

#### 1.3 QCF Diplomas:

A number of existing competency based Qualifications such as NVQs once re-written as credit based Qualifications within the QCF will become “Diplomas” by virtue of their size. For example the new Level 2 and Level 3 Diplomas in Fencing have evolved from the old Fencing NVQs. The content of these particular QCF Diplomas will remain the same; as will the Quality assured assessment strategy that underpins them. However – they will look a little different as they will each represent a certain number of credits at a given level. Each unit will also incorporate both competency outcomes and knowledge outcomes.

**QCF Diplomas should not be confused with the new 14-19 Diplomas** that have been

designed to offer a vocational route in the school sector and embrace a broad range of outcomes to enable young learners to extend both their academic skills and a broad range of their vocational learning experiences. Although the 14-19 Diplomas may involve some work placement activity they are NOT competency based qualifications and have a very different purpose. For instance, the main 14-19 Diploma in the Lantra footprint is called the 14-19 Diploma in Environmental and Land-Based Studies.

The framework hopes to offer maximum flexibility for learners to gain recognition for their achievements (whether they are single units or full Qualifications).

## **2. Health and Safety**

Organizations are reminded of the legal requirements to provide health and safety training for all operatives/employees as appropriate in accordance with the Health and Safety at Work Act 1974.

The training and assessment of operatives/employees required by this scheme is aimed primarily at technical competence for temporary traffic management. It is 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 systems of work.

If they are working adjacent to live highways it is a requirement that operatives/personnel pass the specialist test questions for Highway Works included in the CSCS or the ECS Highway Electrical version Health & Safety touch screen test.

## **3. Temporary Traffic Management**

Highways Organisations are reminded of the requirements for temporary traffic management on all highways including high speed dual carriageways and motorways. For work on high-speed dual carriageways and motorways, other than short duration works on hard shoulders or verges, such works shall be carried out by an Organisation registered to NHSS 12A/B as appropriate. For works on mobile lane closures NHSS12C applies and for works on other roads NHSS 12D applies and Organisations need to ensure that they have appropriately skilled personnel to set out the necessary temporary traffic management measures. Guidance is given in Appendix M of NHSS 12D.

## **4 Introduction to Road Tunnels**

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 specialism.

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.

### **4.1 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 forms part of the TOA may include the Tunnel Manager, Operations Manager, Tunnel Safety Officer, Safety Officer, Maintenance Manager and the Inspection Entity.

## **4.2 Tunnel Operation**

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 management and monitoring
- Handling emergency roadside telephone calls
- Managing traffic signs and signals
- Incident Management
- 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.

## **4.3 Tunnel 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.

## **5 NHSS 22 Training and Competency Requirements**

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.

### **5.1 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 or equivalent qualification, at the appropriate unit and level commensurate with their designated occupation.

Persons should be formally authorised by a competent person within the organization.

## 5.2 Tunnel 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, construction and the operating stages.

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

Appropriate qualifications received from current or previous employer leading to assessment of competence	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).
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## 5.3 Inspection Entity (ies)

The Inspection Entity is the entity undertaking inspections, evaluations and tests.

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

Chartered Engineer or headed by a Chartered Engineer	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).
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## 5.4 Technical Control Room / Supervisor(s)

MINIMUM TECHNICAL QUALIFICATIONS	TECHNICAL CONTROL ROOM SUPERVISOR EXPERIENCE LEVELS	
	NVQ/SVQ Level 2 or 3 or equivalent in Appropriate N/SVQ or equivalent	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).

## 5.5 Further information

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

## 6. Fraudulent Cards

**ACTION IN THE CASE OF SUSPECT CARDS THE FOLLOWING ADVICE IS GIVEN:**

### **SUGGESTED ACTION BY ORGANIZATION**

1. On being presented with a suspect card (check logo, print quality, colour, layout, spelling, likeness of photograph):
  - Take possession of card.
  - Call a member of the body that issued the card. A member of the team will help you confirm your suspicions or otherwise.
2. If the card appears to be fraudulent:
  - Retain the card if possible
  - Make photocopies of front and back
  - Record cardholder's name and address
  - Ask cardholder where the card was obtained from
  - Call the local police and report the matter
  - Refuse access to site (subject to company rules).
3. Forward copies of all evidence to the body who issued the card marked "SUSPECTED FRAUDULENT CARD" with any crime number given by local police.

Note: The body should in the majority of cases fully support any prosecution with technical and factual evidence.

This should help to maintain the integrity of the Highway Sector Schemes.



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

Example of a typical requirement for NHSS:

Item No	Equipment	Purchase Specification	Calibration Control	Calibration Frequency
1	Thermometers and temperature control equipment	Equipment must operate within a tolerance of $\pm 10^{\circ}\text{C}$ at working temperature	Calibration traceable to National Standards	3 monthly (may be extended to 12 months upon demonstration of continued calibration accuracy)
2	Pressure measuring equipment	Appropriate British or International standard	Calibration traceable to National Standards	Annually
3	Thickness/height measuring equipment	Maximum allowable error at any point in working range value $\pm 5\%$	Calibration traceable to National Standards	Annually
4	Measuring wheels, tapes and rules	Maximum allowable error $\pm 1\%$ of the measurement range undertaken (upon purchase only)	Verification check when signs of wear or damage appear	Checks as required

### Note

1. The table does not represent an exhaustive list of monitoring and measuring devices and therefore equipment not included but employed by the Organization should be calibrated to an acceptable standard and described in their quality manual.
2. Visual daily checks of items 1 and 2 shall be carried out on site to confirm that the equipment is working correctly and is not damaged. Records of the daily checks shall be kept.
3. If in-house calibration equipment is used for the calibration of items 1 and 2 it shall not be used for any other purpose and shall itself be calibrated traceable to national standards at intervals not exceeding two years.
4. If in-house calibration equipment is used for the calibration of item 3 it shall not be used for any other purpose and it shall itself be calibrated traceable to national standards at intervals not exceeding five years.
5. Records of all equipment in use, their calibration status and calibration or verification checks undertaken shall be established and maintained.

## APPENDIX F: CERTIFICATION BODIES ACCREDITED FOR MANAGEMENT, OPERATION, INSTALLATION AND MAINTENANCE OF ROAD TUNNELS

(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 the top menu bar
- move down to 'accredited bodies'
- move down to "Accredited Bodies" in the grey box' and left click on this to take you to the list of Accredited Bodies schedules
- move down to Certification Body Schedules and left click to take you to the list of certification schedules
- move cursor down past 'key abbreviations' to 'search within the schedules' - click on 'search UKAS'
- move cursor to "Certification Bodies" in the "Search Within" box and left click
- type in "highway sector scheme no 22" including the double inverted commons for example "highway sector scheme no 19A" "
- left click "search"

This should then list the certification bodies who are accredited to the scheme and their details can be found by clicking on the appropriate links.

### NOTES:

1. Certification Bodies interested in being accredited by UKAS for this Sector Scheme should contact UKAS.
2. The Certification Bodies listed below are those accredited by UKAS at the time of revising the document. Note that the list does not include Certification Bodies accredited by Bodies deemed equivalent to UKAS.
3. Organizations currently registered to ISO 9001 with an UKAS (or equivalent) accredited certification body that does hold registration to this NHSS may wish to consider the following option. Continuing to be registered with their existing Certification Body but having the interpretation of the NHSS carried out by and in conjunction with an UKAS accredited certification body for this scheme."
4. Advice on the current accreditation status of certification bodies to assess against this document (NHSS 22) can also be sought from UKAS (Tel 0208 917 8400)

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

BM TRADA Certification Ltd  
Lloyd's Register Quality Assurance  
SGS UK Ltd

[www.bmtrada.com](http://www.bmtrada.com)  
[www.lrqa.com](http://www.lrqa.com)  
[www.sgs.co.uk](http://www.sgs.co.uk)

## **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 and the additional requirements required by this SSD rely 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 requirements detailed in this SSD.
- 1.3. Certification Bodies shall ensure they are all represented by at least one nominated individual Lead Certification Body (or deputy) who will represent all Certification Bodies at Sector Scheme Advisory Committee. This does not preclude other Certification Bodies from attending, as appropriate.
- 1.4. Certification Bodies shall be represented at the National Highway Sector Scheme Liaison Committee.

### **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 ISO 17021:2006 by the United Kingdom Accreditation Service (UKAS) or an equivalent International Accreditation Forum (IAF) member for assessment and registration of BS EN ISO9001 quality management systems interpreted in accordance with this NHSS.

### **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 shall include, but not be limited to the following:
  - i) knowledge, understanding and application of this SSD (See Appendix G1).
  - ii) knowledge of the manufacture and supply in the road tunnel management, operation, installation and maintenance 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 the product and processes associated with safe and reliable tunnel operation and maintenance. (Conveyance of this knowledge to auditing teams will be determined by the Certification Body and will be audited by UKAS).
  - iii) maintenance of demonstrable technical highway and road tunnel engineering background, capable of reading and understanding specifications and drawings, including knowledge of the Specification for Highway Works and design standards requirements for Highway Works and design standards requirements for management, operation, installation and maintenance of road tunnels.
  - iv) ability 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 specific aspects of the scheme as appropriate.

- v) preferably knowledge of the:
    - Directive 2004/54/EC – minimum safety requirements for road tunnels in the Trans-European Road Network, and amendments;
    - SI 2007 No. 1520, Road Tunnel Safety Regulations 2007, and amendments;
    - Regulatory Reform (Fire Safety) Order 2005, No. 1541, and amendments;
    - International Carriage of Dangerous Goods by Road, ADR 2009, and amendments;
    - Design of Road Tunnels (DMRB, BD78/99);
    - Maintenance of Road Tunnels DMRB, BA72/03); and
    - Inspection & Records for Road Tunnels (DMRB, BD53/95).
- 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, 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 – NHSS 0 Part 4.
- 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 ISO9001:2008 Lead Auditor qualification or Certification Body equivalent and demonstrable expertise in leading assessment teams.
  - ii) BS EN ISO9001:2008 assessment experience obtained from assessments of NHSS 22 activities in different Organizations, including a minimum of different Organizations in any one assessor on a team assessment.
  - iii) technical assessment competence in the categories of management, operation, installation and maintenance of road tunnels.
  - iv) knowledge, understanding and application of this SSD.
  - v) knowledge of the manufacture and supply in the management, operation, installation and maintenance of road tunnel 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 tunnels and processes. (Conveyance of this knowledge to auditing teams will be determined by the Certification Body and will be audited by UKAS).
  - vi) 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) ability to demonstrate that they have ongoing suitable health and safety training which includes appreciation of the risks involved in the sector scheme activities of management, operation, installation and maintenance of road tunnels, and

- viii) preferably knowledge of tunnel, management, operation, installation and maintenance.

#### **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 locations where management, operation, installation and maintenance activities are covered by the scope of this Sector Scheme are being undertaken from.
- 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) and 7.2.3 of this NHSS)

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

- 7.1. Each Lead Certification Body shall provide to the Leader 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

Note: The report shall be available at least a week before each National Highway Sector Scheme

Liaison Committee meeting (normally held each May/June and October/November), so that it may be considered during 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.

# APPENDIX G1: GUIDANCE TO ASSESSORS' AND OTHER AUDITORS' COMPETENCIES REQUIREMENTS FOR NATIONAL HIGHWAY SECTOR SCHEME NHSS 22 – MANAGEMENT, OPERATION, INSTALLATION AND MAINTENANCE OF ROAD TUNNELS

## Section 1 - 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.

## Section 2 - Requirements

Note 1: This section of the guidance is divided in three parts namely 2A, 2B & 2C.

Note 2: Section part 2C will need to be developed by the relevant sector scheme committee to identify all relevant knowledge of their industry that is pertinent to carrying out an audit. It is intended that the content of this part will be used to develop a training awareness course for auditors.

### 2A General background to the NHSS 22.

- i) The reasons for development of the National Highway Sector Schemes (NHSS) and this scheme in particular, and for CB assessors, 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 the Road Tunnel Operators Association and the Highway term Maintenance Contractors Association.

- 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. (This 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.)
- v) 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 22).
- vi) Definitions and terminology which are particular to the scheme. (See section 3 of the NHSS.)
- vii) 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 organisation's training administrator should have this information available (assessors should also be aware of training and competency assessment requirements available from bodies such as *[to be advised – see Appendix C]* who should be able to assist).

viii) Overview of important reference documentation applicable to the scheme

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

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

(ix) Relationship with other NHSS and its applicability to this scheme are set out in Appendix N.

**2B** Summary of how the scheme interprets section 4 to 8 of BS EN ISO 9001 with commentary.

There is a need to provide commentary on those Clauses of BS EN ISO 9001 in Sections 4 to 8 where interpretation has been provided in this document, namely for clauses "4.1; 4.2.1; 4.2.3; 4.2.4; 5.2; 5.5.1; 5.6.1; 6.2.1; 6.2.2; 7.1; 7.2.2; 7.2.3; 7.3; 7.4; 7.5.1; 7.5.2; 7.5.3; 7.5.4; 7.5.5; 7.6; 8.2.2; 8.2.3; 8.3; 8.5.1." (N.B. Blue text indicates that interpretation of other clauses has been suggested above, over and above what was initially indicated).

4. Quality Management System	Interpretation Y/N	Comment
4.1	Y	Check annually by the CB Auditors and other Auditors. Check Schedule of Suppliers website to ensure registration is current.
4.2		
4.2.1	Y	Check Quality Plan is in place and complies with 7.1. If necessary obtain a copy of the plan as evidence.
4.2.2	N	
4.2.3	Y	Ensure that all required contract specific documents are in place. Seek evidence
4.2.4	Y	Ensure that all required contract specific documents are in place. Seek evidence
5. Management Responsibility		
5.1	Y	Check policy document
5.2	Y	Ensure customer feedback documents are in place on completion of the contract.
5.3		Ensure objectives are covered in quality plan and/or policies
5.4		
5.4.1	N	
5.4.2	N	
5.5		
5.5.1	N	Ensure there is an organization plan which covers responsibility/authority in accordance with the requirements of the SSD. Seek evidence. Ensure that personnel with contract specific responsibilities and authorities have been identified and are recorded. Seek evidence.
5.5.2	N	Ensure that the organization management

		have appointed a member with the appropriate responsibility and authorities. Seek evidence.
5.5.3	N	Check internal communication processes have been established.
5.6		
5.6.1	Y	Review copy of annual (or six monthly) management review. Ensure this contains reference to the relevant sector scheme.
5.6.2	N	
5.6.3	N	Seek evidence that the output and actions are considered by top management at regular intervals
6. Resource Management		
6.1	N	Ensure contract/tender review is in place
6.2		
6.2.1	Y	Review copies of training certificates and forward looking training plans. Ensure that these are in accordance with the requirements of the sector scheme documents.
6.2.2	Y	See Appendices C, and D
6.3	N	Review facilities and process equipment to confirm they are suitable for the scope of registration.
6.4	N	In process audit. Checks to include environmental condition records, plant maintenance sheets, access equipment certification and induction records.
7. Planning and Product Realization		
7.1	Y	See Appendix A
7.2		
7.2.1	N	Ensure that the organization has determined all necessary specified statutory and regulatory requirements for contract compliance. This may include supplementary services such as recycling, final disposal, equipment inspection, licensing requirements for driving (HGV), animal including wildlife handling etc
7.2.2	Y	Ensure contract tender review is in place with an appropriate timescale and assessment of availability of resources.
7.2.3	Y	Check effectiveness of communication arrangements.
7.3	Y	Ensure contract/tender review is in place.
7.3.1		
7.3.2		
7.3.3		
7.3.4		
7.3.5		
7.3.6		
7.3.7		

7.4	Y	
7.4.1		Ensure or seek evidence that records are in place.
7.4.2		Seek evidence that purchasing requests are adequate.
7.4.3		Seek evidence that documents are in place.
7.5		
7.5.1	Y	Check as part of in process audit
7.5.2	Y	
7.5.3	Y	Cover during procedure review and seek evidence that records are in place.
7.5.4	Y	Seek evidence that records are in place.
7.5.5	Y	Cover during procedure review.
7.6	Y	See Appendix E
8. Measurement, Analysis and Improvement		
8.1	N	Review copy of annual management review. Ensure this contains continuous improvements to the relevant sector scheme.
8.2		
8.2.1	N	Seek evidence, that organization is meeting customer requirements.
8.2.2	Y	Check internal audits are being carried out.
8.2.3	Y	Check processes are achieving planned results
8.2.4	N	Check that monitoring and measuring process documentation has been implemented in line with the current contract specification. Seek evidence.
8.3	Y	Ensure processes are in place and has been implemented in line with contract specification.
8.4	N	Check analysis of data has provided information to demonstrate effectiveness of QMS and evaluation of continued improvement.
8.5		Check effectiveness of continual improvement.
8.5.1	Y	
8.5.2	N	Seek evidence that documented procedures are in place and operational.
8.5.3	N	Seek evidence that documented procedures are in place and operational.

## 2C – Overview of this NHSS in terms of industry requirements and working practices.

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

- C1 - Safe Working Practices
- C2 - Operative/supervisor training and qualifications
- C3 - Maintain equipment
- C4 - Public protection
- C5 - Environment
- C6 - Testing/inspection/workmanship

<sup>(06/10)</sup>UKAS Issue 2. September 2010

NHSS 22

C7 - Health and Safety

C8 - Other

#### C1 – Safe Working Practices

- Correct Personal Protective Equipment Worn
- 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 etc; understand English.
- Method Statements/work procedures.
- Risk Assessment.
- Induction card/skills cards
- Vehicles/loads are inspected and drivers are qualified
- Site visit including assessment of installation (if possible) and techniques verified.
- Awareness of relevant H&S requirements as applicable to management, operation, installation and maintenance of road tunnels.
- Aware of current best practice including traffic management measures (including site arrangements).

#### C2 Training, Qualifications and Assessment of Competence

- Have achieved appropriate training appropriately certificated
- Have been assessed as competent within their scope of works (e.g. scheme specific assessment/N/SVQ)
- 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 the 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 the HATO role
- Operatives/supervisors have identification
- The Organisation (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 Inspection/ Testing/Workmanship

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

C7 Health and Safety

Auditors should be aware of the Health and Safety at Work etc Act 1974 and associated Health and Safety Legislation, such as CDM regulations, as it applies to this sector scheme.

## 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 Welsh Assembly Government, Scottish Government 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 authorities, 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 NHSS 22 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.
- 2.3 In addition to any requirement for the Organization to notify the Secretary of the Sector Scheme, as detailed in paragraph 4.1 of section 4 of this SSD, the Organization shall notify The Schedule of Suppliers Management Team at Lantra Awards (Lantra House, Stoneleigh Park, Kenilworth, Nr Coventry CV8 2LG) of their registration to this scheme immediately following confirmation from the certification body and thereafter annually using the form provided in Appendix O of this document. This will allow inclusion of the Organization in the published list of registered Organizations maintained by Schedule of Suppliers Management Team. In addition the Organization shall provide details of the NHSS focal point for the Organization for all issues (including finance) to the Schedule of Suppliers Management team.

**Note:** *The Committee, at its discretion, may wish to include requirements for an organization's details of registered office, legal status, accounts (including financial stability) public liability and indemnity insurance, accident records, plant records, welfare policy etc as part of the basic requirements within their scheme and for it to be checked annually. **NB** This list is not exhaustive.*

### 3. Interim Arrangements for Initial Implementation of this Sector Scheme

- 3.1 Not used

### 4. Trade Associations

- 4.1 Membership of a trade association 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.

- |      |   |         |
|------|---|---------|
| i)   | Association of Signals, Lighting and other highway Electrical Contractors | (ASLEC) |
| ii)  | Highways Term Maintenance Association                                     | (HTMA)  |
| iii) | Road Tunnel Operators Association   | (RTOA)  |

## APPENDIX J1: FEEDBACK

### APPENDIX J1: FEEDBACK ON THIS DOCUMENT

Use of Form Appendix J1:

Any observations, feedback or complaints *relating to the content of this document or the process described* herein should be addressed (using the form below) to:

Committee Chairman  
Sector Scheme Advisory Committee for NHSS 22  
c/o UKAS  
21 – 43 High Street  
Feltham  
Middlesex  
TW13 4UN  
Tel: 0208 917 8400  
Fax: 0208 917 8500

**Issue Identified:**

**Suggested Action:**

Name:  
Organization:  
Address:

Contact details:

Date:

## APPENDIX J2: FEEDBACK TO CERTIFICATION BODIES &/OR NOTIFIED BODIES

Feedback relating to certification matters including alleged deficiencies in the product provided under this scheme should in the first instance be taken up with the Organisation. In the event that the matter cannot be satisfactory resolved written complaints should be made to the Organization's certification body, detailing the problem identified. Contact addresses are given in Appendix F. Where a CE marked product is deficient the organization will need to a) advise the client and b) formally advise the local trading standards officer who should take appropriate action.

Issue Identified:

Organization's Details:

Name:

Address:

Feedback

Name:

Organization:

Address:

Date:

Signed:

## Appendix J3: Feedback to Client Bodies on Policing of National Highway Sector Scheme Registration

Feedback relating to policing of National Highway Sector Schemes registration matters in respect of alleged contractual mismanagement/oversights or alleged omissions in contract requirements by client organisations, their management agents or principle contractors where contracts can be or may have been awarded to organisations not registered to this National Highway Sector Scheme, or where contracts are alleged to have omitted requirements for compliance with this National Highway Sector Scheme should be referred back to the client body through an independent third party e.g. a trade association. Details of the alleged mismanagement or omission should as a minimum include the following details

- a) Contract identified
- b)
  - i) Details of omission in contract or
  - ii) Organisation Identified as being awarded the contract or
  - iii) both i) and ii) above
- c) Organisation raising feedback / issue  
Name:  
Organisation:  
Contact details (Address, email address, telephone etc)
- d) Date: Signed:

### Highways Agency Roads/Contracts – Route for Feedback

Feedback should be sent by email to [Standards\\_Feedback&Enquiries@highways.gsi.gov.uk](mailto:Standards_Feedback&Enquiries@highways.gsi.gov.uk)

### Other Highway Authorities

Feedback should be sent back to the relevant project manager or head of division responsible for the contract works. Such information or relevant contact details may be available on that highway authority's web-site.

### Health and Safety Executive

<sup>(06/10)</sup>Concerns about Health and Safety issues should be referred to HSE via HSE's information line 0845 345 0055. Further information is available from HSE's web site ([www.hse.gov.uk](http://www.hse.gov.uk)).

## APPENDIX K: THE INTERPRETATION OF CERTIFICATES ISSUED BY CERTIFICATION/INSPECTION BODIES

NOTE: Inspection certificate are not a normal requirement of NHSS but apply to vehicle recovery (NHSS 17) 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 Organisation. 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 9001:2008 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 Organisation
- 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 Organisation 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.

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

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.

Other examples of typical certificates may be provided at the discretion of the SSAC and could include the following:

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

These example models in figures 1 & 2 are provided 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]*

## **CERTIFICATE OF REGISTRATION**

*[ORGANIZATION NAME]*

*[Organization Address]*

*[Town]*

*[County]*

*[Post Code]*

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

### **BE EN ISO 9001:2009 AND THE FOLLOWING NATIONAL HIGHWAY SECTOR SCHEME[S]: NHSS 22**

For the following scope of registration

#### **Management, Operation, Installation and Maintenance of Road Tunnels**

Certificate Number: *[Certificate Number]*

Issue Date *[date]*

Renewal Date *[date]*

Signature

*[Name & Title of Certification Body Official]*

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

Figure 2 Example Model Appendix

*[Certification Body Name / Logo]*

## **APPENDIX**

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:

National Highway Sector Schemes 22 for the Management, Operation, Installation and Maintenance of Road Tunnels.

***Depot, Regional Office etc***

***Applicable Sector Scheme(s)***

***Scope of Registration***

## APPENDIX K1: SAMPLE SKILLS CARD

NOT USED

## APPENDIX L: GUIDANCE FOR CLIENTS

### 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.

### 2. Specific Guidance

- 2.1. Reference should be made to Appendix M before deciding whether to specify that Organizations should be registered to NHSS 22, as registration to other NHSSs may include relevant requirements for the Management, Operation, Installation and Maintenance of Road Tunnels.
- 2.2. The NHSS for the Management, Operation, Installation and Maintenance of Road Tunnels was originally conceived as a document for use by Clients to specify the minimum standards for quality, training and competence of Organizations used by them to carry out NHSS 22 activities.
- 2.3. The implementation of the NHSS and development of training and competency requirements is intended to provide:
  - a) A competent workforce able to carry out management, operation, installation and maintenance of road tunnels.
  - b) Requirements to evaluate risks and develop processes associated with the management, operation, installation and maintenance of road tunnels and the production of an associated comprehensive quality plan for each contract.

*[During the introductory period for this NHSS, Clients may take into consideration in the quality assessment of an Organization's tender, their commitment to compliance with this NHSS. This may be demonstrated through the extent to which the Organization has introduced a qualified skilled workforce for undertaking the [scheme activity]].*

- 2.4. It is necessary for the Client to ensure that all those involved in carrying out the management, operation, installation and maintenance of road tunnels are appropriately trained, skilled and competent, 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 maintenance of road tunnels.
- 2.5. 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 NHSS on certificates. (See Appendices F and K respectively)
- 2.6. For the NHSS 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 NHSS. Supervisory staff must be instructed to carry out spot checks of identification cards.
- 2.7. The Schedule of Suppliers Management Team 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 [scheduleofsuppliers@lantra-awards.com](mailto:scheduleofsuppliers@lantra-awards.com) to ascertain/check the status of company if it is

not listed on the schedule.

### **3 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 authority 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.

### <sup>(06/10)</sup> **4 Corporate Manslaughter and Corporate Homicide Act 2007**

Advice from HSE regarding corporate manslaughter and corporate homicide is available on the HSE web-site, the following extract has been copied from the HSE web-site.

“The Corporate Manslaughter and Corporate Homicide Act 2007 is a landmark in law. For the first time, companies and organisations can be found guilty of corporate manslaughter as a result of serious management failures resulting in a gross breach of a duty of care.

The Act, which came into force on 6 April 2008, clarifies the criminal liabilities of companies including large organisations where serious failures in the management of health and safety result in a fatality.

The Ministry of Justice leads on the Act and more information is available on its Corporate Manslaughter and Corporate Homicide Act 2007 webpage.

HSE welcomes and supports the Act. Although the new offence is not part of health and safety law, it will introduce an important new element in the corporate management of health and safety.

Prosecutions will be of the corporate body and not individuals, but the liability of directors, board members or other individuals under health and safety law or general criminal law, will be unaffected and the corporate body itself and individuals can still be prosecuted for separate health and safety offences.

The Act also largely removes the Crown immunity that applied to the previous common law corporate manslaughter offence. This is welcome, and consistent with Government and HSE policy to secure the eventual removal of Crown immunity for health and safety offences. The Act provides a number of specific exemptions that cover public policy decisions and the exercise of core public functions.

Companies and organisations should keep their health and safety management systems under review, in particular, the way in which their activities are managed and organised by senior management. The Institute of Directors and HSE have published guidance for directors on their responsibilities for health and safety. ‘Leading health and safety at work: leadership actions for

directors and board members' (INDG417)

Contact us

For specific questions about the act and guidance:

- Ministry of Justice

For health and safety information and answers to specific health and safety questions contact HSE Infoline:

- HSE Infoline”

## **5 Other aspects**

**NOT USED**

## APPENDIX M: GUIDANCE FOR ORGANIZATIONS

Registration to relevant NHSS's for the activity to be carried out means that registration to NHSS 22 is not required. However, employees registered under other NHSS's will have to undergo induction training specific to the tunnel(s) and equipment and processes therein where they are intending to carry out works.

However, employees registered under other NHSS's 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
- ii) Organizations carrying out installation and maintenance of equipment which fall within the control of tunnel staff and for which an NHSS exists – should be registered to that NHSS.

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

This guidance is primarily of relevance to National Highway Sector Scheme Committees and those Organizations registered to these schemes. This Appendix should be read in conjunction with Appendix L "Guidance".

Details are being developed by the Sector Scheme Committee

## **Appendix O - DRAFT APPLICATION FORM TO REGISTER ON THE SCHEDULE OF SUPPLIERS**

The application form is design for Organizations to register their details in accordance with the requirements of this sector scheme; the form may be used in conjunction with registration to other National Highway Sector Schemes.

Attached to this form are a number of appendices designed to assist in the completion of the form these are:

- a) Appendix O - 1 National Highways Sector Schemes with additional Scope recognised

This appendix should be completed and attached with the application form at the time of submission. This appendix confirms the Sector Schemes and scopes your organization's registration.

- b) Appendix O - 2 List of Schemes Current at June 2010

This appendix lists all Sector Schemes which are operational at the time of publication.

- c) Appendix O - 3 – Areas & Regions Map

This appendix lists the areas & regions that your organization may operate within the United Kingdom. You will need to use this map as part of your registration submission, as this defines the areas of the country where you are willing to work or travel to work.

Details of the extent of areas 1 to 14 can be found on the Highways Agency website <http://www.highways.gov.uk/aboutus/143.aspx>

Details of the areas for Scotland, Wales and Northern Ireland are for the purpose of the application form.

- d) Appendix O - 4 Direct debit mandate

Details of the direct debit mandate are being completed by the Sector Scheme Advisory Committee.



Sector Scheme 6 (please confirm scope)	Lighting Columns	<input type="checkbox"/>	Cantilever masts for traffic signals and/or safety cameras	<input type="checkbox"/>
	Closed circuit television (CCTV) masts	<input type="checkbox"/>	Fixed vertical road traffic sign/signal posts	<input type="checkbox"/>
	High mast lighting	<input type="checkbox"/>	Antenna masts	
	Generator masts	<input type="checkbox"/>	Other derivative column and mast products with similar form or features that are manufactured using the standard lighting column or high mast as the main structure	<input type="checkbox"/>

Sector Scheme 7 (please confirm scope)	Thermoplastic Systems	<input type="checkbox"/>	Paint Systems	<input type="checkbox"/>
	Tape Systems	<input type="checkbox"/>	Road Studs	<input type="checkbox"/>

Sector Scheme 8 (current SSD scoping)	Public Lighting	<input type="checkbox"/>	Traffic Signs	<input type="checkbox"/>
	Traffic Signals	<input type="checkbox"/>		
	Highway Electronic	<input type="checkbox"/>	Associated Highway Works	<input type="checkbox"/>
	Highway Electrical	<input type="checkbox"/>		

Sector Scheme 12A/12B (please confirm scope)	12A Installing, maintaining and removing static temporary traffic management on motorways and highspeed dual carriageways for schemes incorporating contraflow operations and/or temporary road markings	<input type="checkbox"/>	12B Installing, maintaining and removing static temporary traffic management on motorways and highspeed dual carriageways for schemes NOT incorporating contraflow operations and/or temporary road markings	<input type="checkbox"/>
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Sector Scheme 12C (please confirm scope)	Dual carriageways with or without hard shoulders and motorways	<input type="checkbox"/>	Dual carriageways without hard shoulders only	<input type="checkbox"/>
	Motorways and/or dual carriageways with full width hard shoulders only	<input type="checkbox"/>		

Sector Scheme 12D (please confirm scope)	Static works	<input type="checkbox"/>	Static works plus dual carriageways	<input type="checkbox"/>
	Static works plus convoy working	<input type="checkbox"/>	Static works plus multi phase traffic signals	<input type="checkbox"/>

Sector Scheme 14 (please confirm scope)	Quality Management of the Production of Asphalt Mixes	<input type="checkbox"/>
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Sector Scheme 15 (please confirm scope)	For the Supply of Paving Bitumens	<input type="checkbox"/>
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Sector Scheme 16 (please confirm scope)	Machine Laying	<input type="checkbox"/>	Hand Laying	<input type="checkbox"/>
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Sector Scheme	Motor Cycle Recovery	<input type="checkbox"/>	Coaches and Buses	<input type="checkbox"/>
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<b>17/17B</b> (please confirm scope)	Passenger Cars and Light Commercial Vehicles Recovery and Removals	<input type="checkbox"/>	Heavy Vehicle Recovery and Removal	<input type="checkbox"/>
	Coach and Bus Recovery and Removal	<input type="checkbox"/>	Specialist Vehicle Recovery and Removal	<input type="checkbox"/>
	Storage for Vehicles for Police Purposes etc.	<input type="checkbox"/>		

<b>Sector Scheme 18</b> (please confirm scope)	Arboriculture	<input type="checkbox"/>	Landscape Construction	<input type="checkbox"/>
	Landscape Maintenance	<input type="checkbox"/>	Environmental Management Activities	<input type="checkbox"/>
	Pesticide Application	<input type="checkbox"/>	Ecological Management Activities	<input type="checkbox"/>

<b>Sector Scheme 19A</b> (please confirm scope)	<b>Workshop</b>			
	Industrial coatings application	<input type="checkbox"/>	Abrasive blast cleaning	<input type="checkbox"/>
	Thermal (metal) spraying	<input type="checkbox"/>	Paint spraying	<input type="checkbox"/>
	<b>Site Works</b>			
	Industrial coatings application	<input type="checkbox"/>	Abrasive blast cleaning	<input type="checkbox"/>
	Water jetting	<input type="checkbox"/>	Paint spraying	<input type="checkbox"/>

<b>Sector Scheme 20</b> (please confirm scope)	Bridgeworks Categories	<input type="checkbox"/>	Workshop	<input type="checkbox"/>
	Site	<input type="checkbox"/>		

<b>Sector Scheme 22</b> (please confirm scope)	Road Tunnel Management	<input type="checkbox"/>	Road Tunnel Operation	<input type="checkbox"/>
	Road Tunnel Maintenance	<input type="checkbox"/>	Installation of Road Tunnel Equipment	<input type="checkbox"/>

## **Appendix O – 2 List of Current Schemes**

Scheme 2A	Sector Scheme for the Design and/or Supply, Installation and Repair of Fences for Infrastructure Works
Scheme 2B	Sector Scheme for the Supply, Installation and Repair of Vehicle Restraint Systems
Scheme 2C	Sector Scheme for the Design, Supply, Installation and Repair of Environmental Barriers (Structural) for Infrastructure Works
Scheme 3	Sector Scheme for the Stocking and Distribution Activities for Mechanical Fasteners
Scheme 4	Sector Scheme for Preservative Treatment of Timber
Scheme 5A	Sector Scheme for the Manufacture of Parapets for Road Restraint Systems
Scheme 5B	Sector Scheme for the Installation of Parapets for Road Restraint Systems
Scheme 6	Sector Scheme for Manufacture and Verification of Lighting Columns
Scheme 7	Sector Scheme for The Application of Road Marking Materials and Road Studs to Road Surfaces
Scheme 8	Sector Scheme for the Overseeing and / or Installation and / or Maintenance of the Highway Electrical Works
Scheme 9A	Sector Scheme for the Manufacture of Permanent and/or Temporary Road Traffic Signs
Scheme 12A	Sector Scheme For Installing, Maintaining and Removing Static Temporary Traffic Management on Motorways and High Speed Dual Carriageways for Schemes Incorporating Contraflow Operations and/or Temporary Road Markings
Scheme 12B	Sector Scheme for Static Temporary Traffic Management on Motorways and High Speed Dual Carriageways for Schemes Not Incorporating Contraflow Operations and/or Temporary Road Markings
Scheme 12C	Sector Scheme for Mobile Lane Closure Traffic Management on Motorways and Other Dual Carriageways
Scheme 12 D	Sector Scheme for Installing, Maintaining and Removing Temporary Traffic Management on Rural and Urban Roads
Scheme 13A	Sector Scheme for The Supply and Application of Surface Dressings to Road Surfaces
Scheme 13B	Sector Scheme for the Supply and Application of Microsurfacing
Scheme 14	Sector Scheme for The Quality Management of the Production of Asphalt Mixes
Scheme 15	Sector Scheme for The Supply of Paving Grade Bitumen
Scheme 16	Sector Scheme for the Laying of Asphalt Mixes
Scheme 17/17B	Sector Scheme for Vehicle Recovery at Highway Construction Sites (17) and Vehicle Recovery and Removal on Control Roads.
Scheme 18	Sector Scheme for the environment and landscape including ecology
Scheme 19A	Sector Scheme for corrosion protection of ferrous materials by industrial coatings
Scheme 20	Sector Scheme for the Execution of Steelwork in Transportation Infrastructure Assets
Scheme 22	Sector Scheme for the Management, Operation, Installation and Maintenance of Road Tunnels

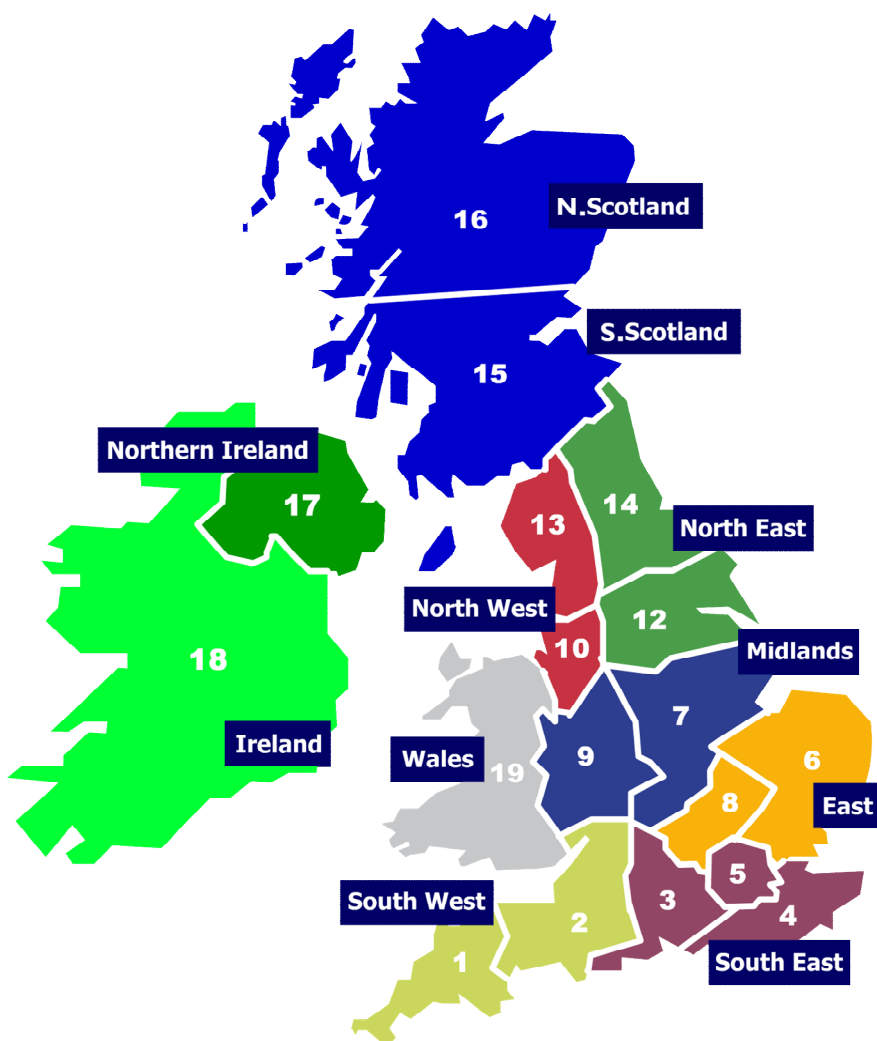
## Appendix O - 3 Areas & Regions Map

### Areas

Area 1	CORNWALL, DEVON
Area 2	SOMERSET, AVON, GLOUCESTERSHIRE, WILTSHIRE
Area 3	BERKSHIRE, BUCKINGHAMSHIRE, DORSET, HAMPSHIRE, SURREY, OXFORDSHIRE, WILTSHIRE
Area 4	KENT, SURREY, EAST SUSSEX, WEST SUSSEX
Area 5	M25, LINK ROADS TO GLA BOUNDARY, BERKSHIRE, BUCKINGHAMSHIRE, ESSEX, HERTFORDSHIRE, KENT, SURREY
Area 6	ESSEX, CAMBRIDGESHIRE, SUFFOLK, NORFOLK
Area 7	LEICESTERSHIRE, NOTTINGHAMSHIRE, LINCOLNSHIRE, DERBYSHIRE PART OF WARWICKSHIRE, RUTLAND PART OF OXFORDSHIRE
Area 8	HERTFORDSHIRE, BEDFORDSHIRE, CAMBRIDGESHIRE, PART OF SUFFOLK
Area 9	WORCESTERSHIRE, WEST MIDLANDS, WARWICKSHIRE, STAFFORDSHIRE, HEREFORD, SHROPSHIRE
Area 10	CHESHIRE, MERSEYSIDE, GREATER MANCHESTER, PART OF LANCASHIRE
Area 12	YORKSHIRE, HUMBERSIDE PORST MOTORWAYS
Area 13	CUMBRIA, PARTS OF LANCASHIRE
Area 14	NORTHUMBERLAND, TYNE AND WEAR, DURHAM, NORTH YORKSHIRE

### Regions

Area 15	SOUTHERN SCOTLAND
Area 16	NOTHERN SCOTLAND
Area 17	NORTHERN IRELAND
Area 18	SOUTHERN IRELAND
Area 19	WALES



Note – Areas 1 to 14 are Highways Agency regions, areas 15 to 19 have been created for use only by the Schedule of Suppliers to track the operation of suppliers outside of England.

## **Appendix O – 4 Direct debit mandate**

This section is being completed by the Sector Scheme Advisory Committee.

## APPENDIX P: OTHER GUIDANCE

NOT USED