



**NATIONAL HIGHWAY SECTOR SCHEMES FOR
QUALITY MANAGEMENT IN HIGHWAY WORKS**

**SCHEME 10A
(previously NHSS 5A)**

**Particular requirements for the application of ISO 9001:2015 for the
manufacture of metallic legacy vehicle restraint systems**

Publishing information

This document is published by Lantra on behalf of National Highways Sector Scheme Committee for Vehicle Restraint Systems.

This document supersedes NHSS 5A which is withdrawn.

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Document Control

Issue Statement

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Revisions

Appendices K and Z updated to align with NHSS 0 Suite of Scopes document.

It is the NHSS's policy that the issue of any revision to scheme documents shall be an issue of the full document rather than individual pages,

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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

Alliance of Sector Skills Councils (Lantra)
Association of Directors of Environment, Economy, Planning & Transport (ADEPT)
Association of Fencing Industries (AFI)
Association of Public Service Excellence (APSE)
Association of Safety Fencing Contractors (ASFC)
CE Marking Association (CEMA)
Certification Body (Lead)
Federation of Awarding Organisations (Lantra)
Highways & Construction Training Association (HCTA)
Highways England
Highways Term Maintenance Association (HTMA)
Notified Bodies (BS EN 1317) (MIRA)
UK Steel Association
UKAS
Vehicle Restraint Manufacturers Association (VRMA)
Welsh Government

b) Corresponding Members

Certification Bodies (All relevant accredited CBs)
Health and Safety Executive (HSE)
Society of Chief Officers of Transportation in Scotland
Transport Northern Ireland
Transport Scotland
Transport Infrastructure Ireland

Exclusion of Liability

The Sector Scheme Advisory Committee for NHSS10

- 1 have and accepts 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/Approval (See Appendix K and NHSS 0 Suite of Scopes).

Note: Where CE marking is relevant to constituent parts; this can only be applied following successful evaluation of the factory production control process by a Notified Body. (Notified Bodies are appointed by the relevant authority in a Member State of the European Union and notified to the European Commission).

In the UK, the relevant authority for notification under the Constructions Product Regulations (CPR) is the Ministry of Housing, Communities and Local Government.

Implementation

Issue 1 ISO 9001:2015

This issue of the SSD is to be implemented immediately from the date of publication and will be hosted on the NHSS authorised website for assessments in accordance with ISO 9001 latest issue. This scheme replaces NHSS 5A and will be mandatory for registration/approval to ISO 9001:2015.

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

The Certification Body shall assess the organization against the latest edition of the scheme within 14 months of its publication.

Note: Where the surveillance/assessment visit of an organization occurs within two months of the publication of this document or a subsequent revision; an assessment for a revision maybe undertaken against the previous edition provided this does not exceed 14 months.

The NHSS document is date specific; however, the organization shall have procedures in place to ensure that the latest version is always available. Organizations should be aware that utilization of internet search engines may result in out of date references being identified/called up.

Introduction

1. This Sector Scheme Document (SSD) replaces NHSS 5A for the Manufacture of Parapets for Road Restraint Systems. It provides for the application design, manufacture and provision of metallic VRS products (including repairs) which do not have conformity marking (i.e. are not CE marked) including metallic TVRS. Installation of the VRS products and replacement parts is covered by NHSS 10B.
2. This SSD sets out the particular requirements for this defined activity beyond the generic requirements of BS EN ISO 9001:2015 and is applicable to contracting organizations and Certification Bodies engaged in the sector. The SSD includes minimum qualifications that an assessor/auditor requires. The document shall be read and implemented in conjunction with BS EN ISO 9001:2015.
3. This Sector Scheme is one of the series of National Highway Sector Schemes (NHSS), which have been developed as bespoke integrated management schemes within an ISO 9001 framework to define BS EN ISO 9001:2015 as it applies to a particular infrastructure/highway related activity/industry within the United Kingdom.
4. Separate Sector Scheme Advisory Committees (SSACs) for each individual activity within highway construction, provide advice to UKAS and expert representation is drawn from all sides of industry. Each SSAC determines relevant particular requirements for BS EN ISO 9001 in relation to the requirements of their particular activity and comes to a consensus on the minimum levels of:
 - Workmanship;
 - Services;
 - Product quality;
 - Materials and Product Testing;
 - Training and competency of personnel;for an organization registered under the Sector Scheme.

The requirements are contained in the individual Sector Scheme Document (SSDs), this document being one of them.
5. The individual NHSS advisory committees are overseen by the National Highways Sector Scheme Liaison Committee (NHSSLC). The NHSSLC 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 advisory committees. It is also the venue where dialogue with UKAS and the Certification Bodies on the application of the Sector Schemes takes place.
6. This NHSS together with BS EN ISO 9001 is designed to:
 - Provide specific particular requirements for the industry
 - Identify risks and opportunity
 - Provide an industry benchmark
 - Ensure that all processes are planned
 - Ensure performance is evaluated.
 - Provide a basis for continued 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 the Certification Body auditors will use in the sector concerned
 - Promote confidence in quality management systems through provision of a robust transparent system.

7. Work carried out for Highways England and other UK Highway Authorities generally use the Specification for Highway Works. Clause 104 sub clause 8 (May 2014 amendment) of the Specification for Highway Works states "Except as described in sub-clause 104.9, where any work, goods or materials to be used in the works are the subject of a quality management scheme listed in Appendix A, only work, goods or materials conforming with such a scheme shall be used and the organizations carrying out such work shall have current registration to the relevant scheme(s)." Appendix A lists National Highways Sector Schemes.
8. This NHSS document is date-specific, however, the organization shall have procedures in place to ensure that the latest version is always available. Organization(s) should be aware that utilisation of internet search engines may result in out of date references being identified/called up. Organizations are recommended to visit www.scheduleofsuppliers.co.uk

(click link and scroll down to find all the latest versions of sector scheme documents).

9. Scheme Feedback

- 9.1. Any observations or complaints relating to the operation of this document and the scheme should be addressed using the procedures given in Appendices J1, J2 or J3 as appropriate. Appendix J1 is to be used for observations and general queries concerning the document and general feedback. Appendix J2 relates to the assessment process carried out by Certification Bodies. Appendix J3 relates to policing of the scheme.
- 9.2. J1 forms will be responded to at the next meeting of the NHSS committee. If the J1 form contains information that is critical, then exceptionally action can be taken prior to the meeting by the chairperson for instance by arranging an extraordinary meeting of the NHSS advisory committee. The secretary will normally advise the originator of receipt of the J1 document and when the next meeting is expected to be held.
- 9.3. Completed J2 forms should be sent directly to the relevant Certification Body.
- 9.4. Completed J3 forms should be sent to the relevant Highway Authority, Police Authority or HSE as appropriate and indicated on the form.

10. **Scheme Contact**

Observations or complaints regarding this Sector Scheme should be addressed to:

The Secretary
Sector Scheme Advisory Committee for VRS
C/o Lantra
Lantra House
Stoneleigh Park
Nr. Coventry, CV8 2LG

E-mail nhss-highways@lantra.co.uk

11. Following the publication of a revised BS EN ISO 9001, the committees review their documents to ensure alignment with the revised BS EN ISO 9001 and that the SSD does not conflict with the current BS EN ISO 9001 prior to withdrawal of the previous edition of the standard.

This SSD is a live document with the SSACVRS meeting 2 to 3 times a year to maintain its currency as appropriate.

Reminders for those using this Scheme.

Always ensure that the current version of the document is being used. The current SSD may be obtained by visiting the National Highways Sector scheme authorised website www.scheduleofsuppliers.co.uk. Currently, the document can be freely downloaded. This NHSS document is date specific, however, the organization shall have procedures in place to ensure that the latest version is always available.

Certification Bodies are accredited by UKAS and the schemes are included in their scope of accreditation. Information on the scope of relevant Certification Bodies may be obtained from the UKAS website.

Lantra hosts the schedule of supplier's register of organizations on their website <http://www.scheduleofsuppliers.co.uk>. This is a self-registration list and it is a requirement of this scheme that organizations register their details on this website and keep them up to date. Failure to do so will result in the withdrawal of the organization's details from the schedule of suppliers.

Certification Bodies will check that the organization is registered on the schedule of suppliers' website together with all relevant information, including a pdf copy of the certification of registration / approval that the Certification Body issues and any other specific documentation to be uploaded specified by this SSD, prior to annual and surveillance visits. See appendix G.

Particular Requirements for the Application of ISO 9001:2015

1. Scope

This SSD, together with the international standard BS EN ISO 9001:2015, describes the requirements of the quality management system to be established by organizations for the application design, manufacture and provision of metallic VRS products (e.g. crash cushions) which do not have conformity marking (i.e. are not CE marked) including metallic TVRS and the design, manufacture and provision of replacement parts for the repair of metallic legacy VRS (Parapets, Safety Barriers etc.) The SSD shall be read and implemented to complement the international standard.

The document provides particular requirements additional to the generic requirements of BS EN ISO 9001:2015.

Organizations will only need to comply with the scope of activity(ies) that they provide under this sector scheme as described in section 4.3, Annex 1, Appendix K and NHSS 0 Suite of Scopes.

The SSD shall be referenced on the Management System certificate of registration/approval issued by the Certification Bodies which will set out the boundaries and applicability of the (contracting) organization's Quality Management System to establish its scope (See Annex 1, Appendix K and NHSS 0 Suite of Scopes).

This document supersedes NHSS 5A, which is withdrawn.

2. Normative Reference

The following normative documents contain provisions which constitute provisions of BS EN ISO 9001:2015 Quality Management Systems – requirements:

- BS EN ISO 9000:2015 Quality Management Systems – fundamentals and vocabulary
- BS EN ISO 9001:2015 Quality Management Systems – Requirements
- BS EN ISO 9004:2018 Quality Management Systems – quality of an organization – guidance to achieve sustained success

NHSS 0

Governance of National Highway Sector Schemes

NHSS 0

Suite of Scopes

NHSS 0

Template for National Highway Sector Scheme Documents - With Guidance (ISO 9001:2015 version)

NHSS 0

Template for National Highway Sector Scheme Documents - Without Guidance (ISO 9001:2015 version)

Specification for Highway Works Series 0400 - Road Restraint Systems (Vehicle and Pedestrian) (version is dependent on specific contract documentation)

3. Terms, Definitions and Abbreviations

3.1 For the purpose of this Sector Scheme Document the terms and definitions given in ISO 9000:2015 and NHSS 0 apply (some terms from ISO 9000:2015 are reproduced below; the full list in ISO 9000:2015 should be referred to) with additions listed in the table below. In particular, the following terms and definitions are applicable:

Roles of Personnel and organizations

Client *:	The ultimate body for which the work is being carried out e.g. Highway Authority, which may also be the customer. (see CDM regulations)
Customer *:	The body (that may also be the client) engaging the organization for the purpose of the work described in this NHSS document.
Designer*:	A competent Individual or a GG102 (successor / equivalent document) registered (by a UKAS accredited certification body) consultancy organization providing specialist supervision and/or consultancy services.
Manager:	A person who is responsible for the overall management of the works.
Organi(z)ation *:	The registered body carrying out the work to this scheme that is responsible for the provision of the product or service. (See SHW Clause 104.8 (May 2014)) (See also Clause 3.2.1 of ISO 9000:2015)
Organi(s)ation	A body that is not registered to National Highways Sector Scheme.
Principal Contractor:	The managing contractor with overall control over the construction phase of a project involving at least 1 Subcontractor. They are appointed in writing by the Client to plan, manage, monitor and co-ordinate the contract including health and safety during this phase to comply with CDM Regulations.
Supervisor	A person who is responsible for the overall supervision of the works.
Supplier *	The organization making available the necessary VRS and/or services for use to meet the requirements of a contract.
Other:	
Anchorage	The method by which a surface mounted vehicle restraint system is securely attached to a structure or suitable foundation of a structure.

Certificate of registration / approval:	A certificate issued by a UKAS accredited Certification Body certifying that the holder operates a Quality Management System complying with BS EN ISO 9001:2015 and this SSD.
Components:	All the necessary elements, including fastenings, which separately and together are necessary to re-establish a vehicle restraint system to its original specification or as required.
Contract	The binding agreement between the businesses.
Contract Specification:	<p>The technical requirements of the contract agreement, for example the following may apply:</p> <ul style="list-style-type: none"> 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. ii) contract specific appendices iii) the contract drawings
Design and Development *:	<p>Application Design:</p> <p>Application design is the layout of product/systems to meet project requirements within the limits available for the product/systems defined by the product/systems designer/proprietor.</p> <p>Product design:</p> <p>Product design is the development of product systems to meet the requirements of the original specification, recognised standards for performance and safety. Guidance on the limits of such products/systems must be provided by the system owner/product designer.</p>
Legacy systems:	Permanent safety barriers, parapets and crash cushions currently on the road network that were manufactured and installed before CE Marking under the Construction Products Regulations became a statutory requirement (for these products).
National Vocational Qualification (NVQ):	A vocational qualification approved by the Office of Qualifications and Examinations Regulation (Ofqual).
Quality *:	The totality of features and characteristics of a product or service that bears its ability to satisfy stated or implied needs.

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 businesses structure, responsibilities, procedures, processes and resources for implementing Quality Management in accordance with the requirements of this document.
Scottish Vocational Qualification (SVQ):	A vocational qualification approved by the Scottish Qualification Authority (SQA). Note: SVQ Levels differ from the English and Welsh NVQ Levels.
“Shall” *:	The term “shall” indicates 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”.)
“Should” *:	The term “should” is used in this document to indicate recognised means of meeting the requirements of this standard. An organization can meet these in an equivalent way provided this can be demonstrated to a Conformity Assessment Body (CAB) (Certification Body).
VRS	Vehicle Restraint Systems as defined by EN 1317.

* These terms and definitions have been changed from those given in ISO 9000 other applicable definitions remain unchanged.

For other terms and definitions relating to Vehicle Restraint products see TD19 (to be replaced by CD377)

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

ACPO (NPCC)	Association of Chief Police Officers Now known as NPCC - National Police Chiefs’ Council
CB	Certification Body
CSCS	Construction Skills Certification Scheme
Lantra	the appointed administrator for services and training, competency assessment and registration as defined in this SSD. In addition, Lantra are an Awarding Body recognised by Ofqual and able to develop regulated training and qualifications
MCHW	Manual of Contract Documents for Highway Works
NGSHW	Notes for Guidance on SHW (Volume 2 of the MCHW)
NHSS	National Highways Sector Scheme
OfQual	Office of Qualifications and Examinations Regulation in England and

Wales

QCF	Qualifications Curriculum Framework (now regulated qualifications framework)
SHW	Manual of Contract Documents for Highway Works Volume 1: The Specification for Highway Works (and any subsequent amendments) published by The Stationery Office (TSO) for Highways England, Transport Scotland, The Welsh Government and Transport Infrastructure Ireland.
SSAC	Sector Scheme Advisory Committee
SSD	Sector Scheme Document
UKAS	United Kingdom Accreditation Service (The United Kingdom's National Accreditation Body) or any recognised European Union National Accreditation Body or any equivalent International Accreditation Forum (IAF) Multi-Lateral Agreement (MLA) signatory with a scope which includes this sector scheme.

4 to 10 Quality Management System Requirements

Particular Requirements of this Sector Scheme

Introduction

This document shall be read in conjunction with the requirements of ISO 9001:2015

Clause/Paragraph numbers in this section reference appropriate paragraphs of ISO 9001:2015. The requirements of ISO 9001:2015 are deemed to apply unless specific additions are required. Where 'No specific particular requirement; the requirements are as stated in ISO 9001:2015 without further qualification' is recorded under an ISO 9001:2015 clause heading this means that it is not considered necessary to provide a particular requirement for that clause.

The particular requirements given below are to assist in the clarification of the ISO 9001:2015 text for the relevant activity, no inference should be made that ISO 9001:2015 requirements are diluted or deleted because of this particular requirement.

4 Context of the organization

4.1 Understanding the organization and its context

The organization shall select the activities and services within its scope from those listed in Annex 1, Appendix K and NHSS 0 Suite of Scopes.

4.2 Understanding the needs and expectations of interested parties

No specific particular requirement; the requirements are as stated in ISO 9001:2015 without further qualification

4.3 Determining the scope of the quality management system

The scope of the quality management system shall cover the range of specific services that the organization are competent to supply and which they are seeking registration/approval (see Annex 1, Appendix K and NHSS 0 Suite of Scopes). Out-sourced services relevant to this scheme shall be controlled in accordance with this scheme.

4.4 Quality management system and its processes

4.4.1 No specific particular requirement; the requirements are as stated in ISO 9001:2015 without further qualification

4.4.2 The organization shall have a process in place to input and maintain their registration to this sector scheme on the Schedule of Suppliers website www.scheduleofsuppliers.co.uk, sosadmin@lantra.co.uk immediately following confirmation of their certification to the sector scheme from the certification body. (See Appendix O for information). The organization shall notify Lantra's NHSS Schedule of Suppliers if Certification is suspended or withdrawn. (email - scheduleofsuppliers@lantra.co.uk)

5 Leadership

5.1 Leadership and commitment

5.1.1 **General**

The organization's policy document shall include top management support for this Sector Scheme. (This would normally be the organization delivering the product and/or service).

5.1.2 **Customer focus**

(i) Processes for determining customer requirements shall consider the interaction with other works and interested parties. Interested parties shall include the Customer, Client and other contractors, and those that interact with or use the Client's infrastructure e.g. the general public including travelling public, emergency services and other relevant organisations and stakeholders. This will include processes to minimise disruption and inconveniences.

(ii) Safe working methods shall be documented and any deviation from these methods shall be notified to the Client/customer/ relevant interested parties as required.

(iii) A copy of all relevant working methods and risk assessments for undertaking the works shall be available.

5.2 **Policy**

5.2.1 **Establishing the quality policy**

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

5.2.2 **Communicating the quality policy**

No specific particular requirement; the requirements are as stated in ISO 9001:2015 without further qualification

5.3 **Organizational roles, responsibilities and authorities**

Where a quality plan is required by the contract, relevant organizational roles, responsibilities and authorities shall be included (see Clause 7.5.1 and Appendix A)

The organization shall define who is responsible for the roles defined by this sector scheme document

6 **Planning**

6.1 **Actions to address risks and opportunities.**

6.1.1 The organization shall take into account the risks and opportunities relating to this NHSS.

6.1.2 No specific particular requirement; the requirements are as stated in ISO 9001:2015 without further qualification

6.2 **Quality objectives and planning to achieve them**

6.2.1 The quality objectives shall include a commitment to meet Customer and Client requirements with respect to the activities within the scope of this SSD

6.2.2 The organization shall set quality objectives relating to sustainability and environmental performance. These shall include targets for minimising waste disposal and maximising recycling, improving the environmental performance of the organization, and use of recycled materials.

6.3 Planning of changes

No specific particular requirement; the requirements are as stated in ISO 9001:2015 without further qualification

7 Support

7.1 Resources

7.1.1 General

No specific particular requirement; the requirements are as stated in ISO 9001:2015 without further qualification

7.1.2 People

Manufacture

The contracted organization(s) to do the work shall maintain training records for its employees with specific reference to the requirements of this Sector Scheme. The manufacturer's workshop shall be supervised by suitably experienced/qualified personnel.

Welding Personnel

Training/qualification requirements for welding personnel involved with the manufacture of metallic legacy VRS replacement parts shall conform with the relevant Clause in Series 400 of the Specification for Highway Works for steel and for aluminum alloys as appropriate, however please note the following:

1. For steelwork BS EN 287-1 has been superseded by BS EN ISO 9606-1. (Note Series 400 of the SHW (May 2017 version should be updated to reflect the latest standard for welder qualification i.e. BS EN ISO 9606-1). From a practical point of view certification to BS EN 287-1 is also valid until the standard is withdrawn, after which certification to BS EN ISO 9606-1 is required (see NHSS 20 document - Note 4 to the Table in Appendix C). Although BS EN 287-1 has been superseded it has not been withdrawn by BSI.

2. For aluminium, BS EN ISO 9606-2 is the current standard for the qualification of welders for aluminium and aluminium alloys.

3. That the current standard for the qualification of welding operators (for mechanized and automatic welding) is BS EN ISO 14732 which supersedes BS EN 1418, which is relevant for parapets as it is quoted in the Series 400 of the SHW (May 2017 version).

4. BS EN 1418 has been withdrawn by BSI. (Series 400 of the published SHW (May 2017 version) needs to be updated to reflect this change).

Production Inspection Personnel

The manufacturer shall provide suitable personnel to carry out inspection of production

welds as required by paragraph 4 of Annex 3 of this SSD. Personnel conducting visual inspection shall be certified by the Certification Scheme for Welding and Inspection Personnel (CSWIP) or equivalent at a competency level appropriate to the type of weld being inspected. Personnel conducting non-destructive testing (NDT) shall be certified by the CSWIP or equivalent body appropriate to the equipment used and weld groups inspected all in accordance with BS EN ISO 9712:2012. Evidence of training and qualification shall be retained and made available for examination when required.

NDT Technicians

Technicians shall be approved to BS EN ISO 9712:2012 for NDT testing by hand.

Other Inspection Personnel

Qualification Details for inspection of the following activities are:

a) Visual Welding Inspection

PCN/GEN Appendix E5 qualification (level 2) or equivalent

b) Liquid Penetration Testing of Welding

PCN/GEN Appendix E2 qualification (level 2) or equivalent

c) MPI Testing

PCN/GEN Appendix E1 qualification (level 2) or equivalent

d) Ultrasonic Testing

PCN/GEN Appendix C1 (level 2) or equivalent

Design

Design Personnel

The Design requirement shall be provided to the Manufacturer.

Note 1: Installation will be carried out by organizations registered in accordance with NHSS 10B.

Note 2: Installers replacing existing parts of metallic legacy VRS shall be trained and competent in accordance with the original manufacturer's installation instructions or as detailed in NHSS 10B or its successor document.

Note 3: Some Legacy products will be one off designs or systems where the proprietor no longer exists or supports training. In this case proprietary system training will not be available – all other aspects of 10B shall be complied with as applicable.

7.1.3 Infrastructure

No specific particular requirement, the requirements are as stated in ISO 9001:2015 without further qualification

7.1.4 Environment for the operation of processes

No specific particular requirement, the requirements are as stated in ISO 9001:2015 without further qualification

7.1.5 Monitoring and measuring resources

7.1.5.1 General

The organization shall maintain documented information to demonstrate the manner and frequency of the calibration of the measuring and test equipment. (See Appendix E for guidance).

7.1.5.2 Manufacturer's guidance for the maintenance, servicing and calibration of equipment shall be taken into account within the quality management system. (See Appendix E)

7.1.6 Organizational knowledge

The organization shall describe its knowledge by reference to Annex 2 and Appendix B.

Note: Reference and legal documents listed in Appendix B are the main documents relevant to this scheme, however it should be noted that this list is not exhaustive and is only current at the time this version of the scheme document is published. The latest document shall be used unless constrained by contractual requirements.

The organization is responsible for providing access to all applicable documentation relating to the works being undertaken and that the appropriate versions are used.

7.2 Competence

See Clause 7.1.2 People above

7.3 Awareness

No specific particular requirement; the requirements are as stated in ISO 9001:2015 without further qualification

7.4 Communication

The relevant quality plan and standard operating procedures shall be communicated to all relevant employees.

7.5 Documented information

7.5.1 General

When specified in the contract documents or requested, the organization shall prepare a quality plan or alternative document as defined in the Contract Specification and if required submit this for acceptance or approval by the Client, as appropriate, prior to commencement of work (See section 8 and Appendix A)

7.5.2 Creating and updating

No specific particular requirement; the requirements are as stated in ISO 9001:2015 without further qualification

7.5.3 Control of documented Information

7.5.3.1 No specific particular requirement; the requirements are as stated in ISO 9001:2015 without further qualification

7.5.3.2 Control of Documents

The organization shall have processes in place to ensure that the applicable versions of relevant Standards and Documents are always available (See Appendix B).

Control of Records

The organization shall liaise with the customer/client to ensure that records required for CDM compliance are made available to the Client. The organization shall liaise with the customer/client to ensure that records are provided in a format that can be readily inputted into the Client's asset management register/database.

The organization shall determine which documents shall be retained in order that they are available for inspection in any future investigations, for example; road traffic accidents.

8 Operation

8.1 Operational planning and control

- (i) Where considered necessary by the organization, a project specific Quality Plan shall be produced describing the processes that will be implemented in that project using Appendix A, the Specification for Highway Works and associated contract documents.
- (ii) The quality plan shall not be considered in isolation. An integrated approach should be taken which links the quality plan with other management plans.

NOTE 1: 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 processes/schemes within an overall management scheme within an organization.

- (iii) 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.

8.2 Determination of requirements for products and services

8.2.1 Customer communication

Where possible and appropriate the vehicle restraint systems information listed below shall be provided in English by the organization to the customer:

- (i) Manufacturer's specification
- (ii) Installation drawings
- (iii) Manufacturer's installation instructions or installation manual including foundation requirements and test methods to verify their performance
- (iv) Manufacturer's repair and maintenance manual
- (v) Where contract specific requirements, e.g. Appendix 4/1 of the SHW, specify requirements for loads imposed by road restraint systems on foundations or

structures, the nominal loads (direct forces, moments and co-existent shears) that will be transferred from the VRS to the structure or foundation shall be provided

8.2.2 **Determining the requirements for products and services**

Organizations using this Sector Scheme shall ensure best practice such as specifying any other relevant NHSSs as appropriate to the nature of the work being undertaken e.g. NHSS 3B, NHSS 19A and NHSS 20. Where product design evaluation is required organizations shall be registered to GG102(see definitions for designer) which includes assessment of metallic legacy VRS replacement.

- a) The organization shall, prior to commencement, check the practicality of the proposed work.

This may include liaison with third parties, e.g. the Highway Authority, the client/customer, the manufacturer. Where irregularities or inconsistencies with the specification or health and safety requirements are encountered these shall be brought to the attention of the customer/client for resolution.

- b) Determination of requirements related to the product 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; statutory and regulatory requirements related to the resource efficiency aspects of the product including as appropriate compliance with European licencing regulations (e.g. driver CPC - periodic training)

8.2.3 **Review of requirements related to products and services**

8.2.3.1 No specific particular requirement; the requirements are as stated in ISO 9001:2015 without further qualification

8.2.3.2 No specific particular requirement; the requirements are as stated in ISO 9001:2015 without further qualification

8.2.4 **Changes to requirements for products and services**

No specific particular requirement; the requirements are as stated in ISO 9001:2015 without further qualification

8.3 **Design and development of products and services**

8.3.1 **General**

The organization shall define the scope of design services using Annex 1. An application design review shall be carried out and signed off by the competent authorising officer. The application design process shall take into account the installation and maintenance requirements of the product. The organization shall have processes in place to ensure that the best practices, including health and safety elements, are regularly reviewed.

8.3.2 **Design and development planning**

The certification for the organization shall include application design as applicable to the

organization's scope (see clause 8.2.2 and 4.1)

The design process may be limited to the evaluation of design for the replacement of metallic legacy VRS components identified following a survey of the existing installation.

Where applicable any design modifications or changes shall be referred back to the product's Intellectual Property Rights owner.

The scope of design services shall be defined by the organization.

The quality plan shall identify personnel involved with product design and/or development along with their appropriate qualifications/experience.

The quality plan shall identify personnel involved with application design along with their appropriate qualifications/experience.

8.3.3 **Design and development inputs**

An organization that carries out application design shall reaffirm the type, working width, containment level etc where known and where applicable.

For parapets and safety barrier on structures the organization shall provide post capacities to the structural designer and/or application designer as appropriate.

The organization shall liaise with the system owner to ensure that the application of design and development is appropriate for the application it is intended to meet. Liaison should be conducted through appropriate contract channels.

Where applicable, the organization shall demonstrate how it conforms to the customer's specification of works

Durability

All permanent safety barriers, vehicle parapets, terminals and transitions shall conform to the following as specified in SHW Series 400:

- (i) All components shall be designed to achieve a serviceable life of not less than:
 - a) 20 years for metal safety barriers, terminals and transitions
 - b) 30 years for metal vehicle parapets and metal components of combined metal and concrete vehicle parapets; and
- (ii) For metal vehicle parapets and metal components of combined metal and concrete parapets the serviceable life shall, except where stated in contract specific Appendix such as 4/1 of NGSHW, be obtained without the requirement for any maintenance other than that resulting from accidental damage. In addition, metal components of combined metal and concrete parapets shall be capable of replacement without damage to the concrete components. "

8.3.4 **Design and development controls**

No specific particular requirement; the requirements are as stated in ISO 9001:2015 without further qualification

8.3.5 **Design and development outputs**

No specific particular requirement; the requirements are as stated in ISO 9001:2015 without further qualification

8.3.6 Design and development changes

No specific particular requirement; the requirements are as stated in ISO 9001:2015 without further qualification

8.4 Control of externally provided products and services

8.4.1 General

The organization shall establish processes to ensure that vehicle restraint system components are purchased/obtained from a supplier providing relevant and where appropriate CE marked items meeting the contract and design requirements. Installation instructions/drawings and essential information to facilitate the installation of the replacement of metallic legacy VRS components where this is applicable shall be provided with the product. The organization shall comply with the requirements of Clause 402 in the SHW (May 2017 or relevant clauses within later versions)

8.4.2 Type and extent of control of external provision

The organization(s) shall establish, implement and record the inspection or other activities necessary for ensuring that purchased products meet specified purchase requirements.

Note: The installation of the product shall be completed by a registered/certified NHSS 10B organization whose scope includes installation of these products.

8.4.3 Information for external providers

The specification and tolerances for incoming materials, equipment and services (including records and/or personnel training requirements for any services) to be procured shall be established and communicated to suppliers by appropriate traceable and confirmable means (e.g. emailed or written instructions, and recorded or transcribed telephone messages).

8.5 Production and service provision

8.5.1 Control of production and service provision

The organizations shall include activities and services as shown in Annex 1 with regards to production and service provision.

8.5.2 Identification and traceability

Where there are legislative and/or contractual requirements, there must be an auditable process of document retention which can be clearly identified and traced.

The organisation shall have a system in place which provides documented information to demonstrate the manner and frequency of the calibration of the measuring and test equipment (See Appendix E for guidance).

Documentation required as a minimum to demonstrate compliance with the contractual requirements will typically include but not be limited to;

- Calibration records
- Also see requirements contained in Series 0400 of the SHW

8.5.3 **Property belonging to customers or external providers**

The quality management system shall include a procedure for materials which are supplied by the Customer or the Client. For example, VRS components which may be pre-used.

The organization may accept un-damaged pre-used components (excluding fasteners), as specified by the manufacturer/promoter, as representing Customer Supplied Product in maintenance work, repair work or where specifically required in a contract.

8.5.4 **Preservation**

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

8.5.5 **Post-delivery activities**

Information required to be provided by the supplier

The organization shall supply all documents as detailed in a) to e) of this clause of ISO 9001:2015.

8.5.6 **Control of changes**

No specific particular requirement; the requirements are as stated in ISO 9001:2015 without further qualification

8.6 **Release of products and service**

As appropriate the organization shall provide as a minimum the completed Declaration of Conformity.

The organization shall retain records to show that the person authorizing the release of products and services had the necessary authority and competence to do so.

8.7 **Control of nonconforming outputs**

8.7.1 Non-conforming components 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.

The quality management system documentation shall identify the control procedures to be taken when non-conformity in materials, preparation or undertaking of works (state as appropriate for the NHSS).

Note: Some inconsistencies and/or irregularities may not initially be reasonably evident e.g. as a result in delays in receipt of test results on a component or within the control of the organization and can arise during or after manufacture. The organization may seek concessions from the customer with regard to acceptance or repair as a result of such factors.

- 8.7.2 The organization shall implement and retain documented information such that any work not conforming to the contract specification shall be rejected and precluded from use, reworked to conform to the specification, or formally accepted under concession in writing from the Client.

Documented information shall be retained in accordance with 7.5.

9 Performance evaluation

9.1 Monitoring, measurement, analysis and evaluation

9.1.1 General

No specific particular requirement; the requirements are as stated in ISO 9001:2015 without further qualification

9.1.2 Customer satisfaction

No specific particular requirement; the requirements are as stated in ISO 9001:2015 without further qualification

9.1.3 Analysis and evaluation

No specific particular requirement; the requirements are as stated in ISO 9001:2015 without further qualification

9.2 Internal audit

Internal audits shall include an audit of quality plans where appropriate.

- 9.2.1 The organization shall conduct internal audits at least once a year to ensure its continuing suitability and effectiveness to conform to this NHSS.

- 9.2.2 No specific particular requirement; the requirements are as stated in ISO 9001:2015 without further qualification

9.3 Management review

9.3.1 Management review

The organization shall review the quality management system at least once a year to ensure its continuing suitability and effectiveness to conform to this NHSS.

9.3.2 Management review inputs

No specific particular requirement; the requirements are as stated in ISO 9001:2015 without further qualification

9.3.3 **Management review outputs**

No specific particular requirement; the requirements are as stated in ISO 9001:2015 without further qualification

10 Improvement

10.1 General

No specific particular requirement; the requirements are as stated in ISO 9001:2015 without further qualification

10.2 Nonconformity and corrective action

10.2.1 No specific particular requirement; the requirements are as stated in ISO 9001:2015 without further qualification

10.2.2 No specific particular requirement; the requirements are as stated in ISO 9001:2015 without further qualification

10.3 Continual improvement

No specific particular requirement; the requirements are as stated in ISO 9001:2015 without further qualification

Annex 1 - SCOPE OF SERVICES PROVIDED BY THE ORGANIZATION

<p>Description of Service</p> <p><i>For an Organization to become registered under the Scheme it must provide at least one of the services shown shaded.</i></p>
<p>Inspection</p>
<p>Sub categories</p> <p>Pre-manufacture inspection of VRS</p>
<p>Product Design, Testing, and Manufacture of replacement legacy systems parts</p>
<p>Sub categories</p> <p>Design of replacement metallic legacy VRS parts</p>
<p>Manufacture and testing of replacement metallic legacy VRS parts</p> <p>Manufacture of legacy VRS products</p> <p>Material testing (if required) of legacy VRS products</p>
<p>Select and supply products to meet specified performance criteria</p>
<p>Sub categories</p> <p>Procure materials</p>

Annex 2 - COMPETENCY OF ORGANIZATION (Example only)

Service	Competency Attributes required to provide the Service	Competency requirements
Inspect legacy VRS and produce a condition report	To be determined by others e.g. (NHSS10B)	Inspector should have a background in metallurgy and industrial production and a relevant engineering qualification.
Assess damaged legacy VRS and make recommendations for repair or replacement	To be determined by others e.g. (NHSS10B)	Inspector shall have as a minimum current VRS blue installer card with relevant product classification.
Design of legacy VRS replacement & Drawings	Organizations carrying out these services are advised to make reference to <i>(or if contractually required shall comply with)</i> Design Manual for Roads and Bridges; Volume 2 Section 2 Part 8 TD19/06 (will be replaced by CD377) in particular clause 1.5, and to Volume 0 Section 2 Part 1 GG 102 or successor documents.	
Manufacture and testing of replacement legacy VRS parts	<p>Details shall be available from the IPR owner. Where there is no IPR check with the asset owner.</p> <p>It is known that individual highway authorities have designed vehicle restraint systems (parapets) for their own territory and it is recommended that appropriate checks with the authorities are undertaken.</p>	Details shall be available from the IPR or Asset owner.

ANNEX 3: TESTING REQUIREMENTS FOR MANUFACTURED COMPONENTS

1. Material tests for aluminium alloy structural members

1.1 Manual testing for rail sections

Test piece selection

For batches of material consisting of five or more extruded lengths, cut a piece of material approximately 300 mm long from each of four extruded lengths within the batch, for tensile testing.

For batches of material consisting of up to four extruded lengths, cut a piece of material approximately 300 mm long from each extruded length, for tensile testing.

NOTE. An extruded length is the product of one extrusion billet.

A batch shall consist of a maximum of 2t of extruded product. All material in a batch shall be extruded from billet produced in the same cast and homogenized in the same furnace charge. All material in a batch, and its associated tensile test pieces, shall be precipitation heat treated in the same furnace charge. Where material is solution treated rather than press quenched, all material in a batch shall be solution treated in the same furnace charge. If tensile test pieces are cut prior to solution treatment, they shall be included in the same furnace charge as the lengths from which they were taken.

Procedure

Carry out tests for either conductivity or, hardness after precipitation heat treatment, using the following procedure. Test each test piece obtained as described above for conductivity or hardness at its mid-point, on the traffic face of the section. Mark the reading obtained on the test piece. Test the front and back ends of all lengths of rail for conductivity or hardness on their traffic face and mark the readings on the rail. Find the highest conductivity reading or the lowest hardness reading for a batch of material, including its associated test-piece lengths.

If a test piece length has the highest conductivity reading or the lowest hardness reading then machine a tensile test piece from it, in accordance with BS EN 10002-1.

If a length of rail has the highest conductivity reading or the lowest hardness reading, cut a length of approximately 300 mm from the end of the rail at which the reading is found. Machine a tensile test piece from this length, in accordance with BS EN 10002-1. Test the tensile strength of the machined test piece in accordance with BS EN 10002-1 on a tensile test machine calibrated by the United Kingdom Accreditation Service (UKAS), or similar approved body.

1.2 Drift testing of hollow sections –rails

Test piece selection

For hollow sections, take a drift test piece of length approximately 150 mm from the front of every extruded length, adjacent to the front length of the hollow section. Mark the position of every cut length and test piece on the material. NOTE. An extruded length is the product of one extrusion billet. The front of the length is that which has been extruded first.

Procedure

Flare each drift test piece obtained as above using a conical or tapered steel mandrel with an angle of 30° to 60°. Force the mandrel into each test piece without shock. Apply a load to the test piece to cause a tear of sufficient length that the fracture surface may be visually examined.

Acceptance criteria

If the fracture surface of the test piece shows tearing or plastic type fracture across 100% of its surface it shall be deemed to have passed and all material in the extruded length from which it was taken shall be deemed acceptable.

If the test piece splits down an extrusion weld and does not show tearing or plastic type fracture across 100 % of its fracture surface then it shall be deemed to have failed. If there is only one member in the extruded length from which the test piece was taken, discard this.

If there is more than one member in the extruded length from which the test piece was taken, take a further drift test piece from the back end of the first member. Discard the remainder of the first member. If the new test piece passes then the remainder of the extruded length shall be deemed acceptable. If it fails then discard the remainder of the extruded length.

NOTE. The front member is that which has been extruded first and the front of the member is the end that has been extruded first.

2. Aluminium Alloy Effective Longitudinal Members

2.1 Drift Testing

The following requirements for effective longitudinal members shall be observed. The metallurgical integrity of aluminium alloy sections shall be proven by drift testing in accordance with paragraph 1.2 above.

3. Welding

Weld procedures for aluminium alloy posts shall be verified by means of a static load test conducted not less than 3 days after welding. The test shall be deemed to be invalid if the weld size is less than the nominal size or more than 15 % above it. Testing verified by an independent competent witness.

Approval shall be by an independent inspecting authority using registered welding engineers, registered welding quality engineers or equivalent to the satisfaction of the purchaser.

4. Production inspection and Testing – Non-destructive Testing

4.1 Inspection personnel

The manufacturer shall provide suitable personnel to carry out inspection of production welds as described in section 7 paragraph 7.1.2 of this SSD.

4.2 Visual inspection

All welded joints shall be subject to visual inspection after cleaning prior to NDT and protective treatment. The relevant techniques in BS EN 970 shall be applied as appropriate. Weld surfaces shall be free of slag residues, sharp edges, cracks and lack of fusion, including overlap. All surfaces shall be free of weld spatter, arc strikes and contaminants. The throat dimensions of butt welds and the leg length and apparent throat dimensions of fillet welds, as measured by a welding gauge and taking into account lack of fit, shall be not less than those specified, except that local shortfalls up to 1mm are acceptable, provided the average dimension over any 50mm length is not less than the specified dimension. The toe angle shall be not less than 90°. Undercut shall not result in a section loss of more than 5% over any 50mm length of joint, nor shall its depth exceed 0.5mm or 10% of the thickness, whichever is less.

Where on visual inspection the presence of cracking or lack of fusion is suspected, testing by magnetic particle inspection or liquid penetrant inspection shall be carried out in accordance with BS EN9934-1 (or BS 6072) or BS 6443 as appropriate. (See also requirements of the Specification of Highway Works – Series 400 May 2004 amendment or later).

4.3 Magnetic Particle Inspection (MPI) and Liquid Penetrant Inspection (LPI)

MPI shall be applied in accordance with BS EN ISO 9934-1 (or BS 6072) to joints in steel parapets, selected in accordance with paragraph 4.5 below, where any of the material thickness exceeds 20mm.

Liquid penetrant inspection in accordance with BS EN 571-1 shall be applied to welds in aluminium alloy posts between the post and the base plate and any gusseting to the connection as selected in paragraph 4.5. (See also requirements of the Specification of Highway Works – Series 400).

4.4 Ultrasonic Testing

Post to base plate joints selected in accordance with paragraph 4.5 shall be ultrasonically tested where the post is butt welded and is 8 mm thick or greater in the traffic face half of the post section or, if fillet welded, the leg length is greater than 12 mm nominal. The ultrasonic testing of steel and aluminium shall be in accordance with BS EN 1714. The weld shall be free of cracks. The height of buried slag and lack of fusion shall not exceed 3mm and, within 6mm of the outer surface, their individual lengths shall not exceed 10mm. The resulting net throat area loss over any 50mm length shall not exceed 5 % of the specified throat area.

4.5 Frequency of non-destructive testing (NDT)

Joints for MPI, LPI or ultrasonic testing shall be selected as follows. All joints of each type up to a batch size of 10 components and 10 % of the manufacturer's production thereafter for each type of component (see 4.3 and 4.4) shall be tested. If non-conformances are found, the scope of testing shall be doubled. If further non-conformity is found, the whole batch shall be tested.

NOTE. Differences in either member cross-sectional shape, joint configuration or weld type constitute a change in component type. Variations in cross-section size or member length need not constitute a change in component type. Variations in parent metal thickness or weld throat dimension from the specified sizes on the sample selected for the destructive test may be included within the same type up to a limit of + 40 %.

APPENDIX A: REQUIREMENTS TO BE DOCUMENTED

Design

An example of a design quality plan is given in GG102

Manufacturing

The documented procedures shall include the following;

1. Customer details, name and address, contact details.
2. Definition of the product or service being provided.
3. Personnel carrying out the work and reference to their relevant qualifications and experience. This shall include, as appropriate, designers and design developers, welders, flame cutter users, inspectors of welds, material and end product testers.
4. Programme of work.
5. Contract Specification requirements.
6. Processes for receipt and examination of compliance certificates for purchased products.
7. Product identification and traceability.
8. Contract specific requirements for storage or transportation.
9. Testing programme.
10. Records deposition.

Appendix B: Reference and Associated Documents (Bibliography)

The list of standards and documents below are date specific; however, the organization shall have procedures in place to ensure that the latest version is always available. Organizations should be aware that utilisation of internet search engines may result in out of date references being identified/called up.

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.

1. Reference Documents

The organization shall have access to all relevant reference documents to the context of their organization, for example;

- 1.1 The Manual of Contract Documents for Highway Works, and amendments:
 - Volume 1: Specification for Highway Works (SHW):
 - Volume 2: Notes for Guidance on the Specification for Highway Works

- 1.2 Other contract specific documents

- 1.3 Design Manual for Roads and Bridges.
 - 1.3.1 TD19 Requirement for Road Restraint Systems – replacement by successor documents (replaced by successor document CD377)
 - 1.3.2 GG102 Quality Management Systems for Highway Design – latest version (or succession document)
 - 1.3.3 GD02/08 Quality Management Systems for Highway Design – May 2008
 - 1.3.4 GG104 Standard for safety risk assessment on the strategic road network

- 1.4 BS EN ISO 9000:2015 – Quality Management Systems – Fundamentals and Vocabulary

- 1.5 BS EN ISO 9001:2015 – Quality Management Systems – Requirements

- 1.6 BS EN ISO 9004:2018 - Quality management - Quality of an organization - Guidance to achieve sustained success

- 1.7 BS 7669 - Part 3 - Vehicle restraint systems - Guide to the installation, inspection and repair of safety fences

- 1.8 BS 6779 - Part 1 - Highway parapets for bridges and other structures - Specification for vehicle containment parapets of metal construction.

2 Associated Reference Documents

- 2.1 Non-Proprietary Safety Barrier Systems (NPSBS revision 1)

- 2.2 Standards:

- 2.2.1 National Highway Sector Schemes as applicable e.g. NHSS20
- 2.3 Installation instructions issued by the manufacturer of proprietary systems
- 2.4 Construction Design and Management Regulations
- 2.5 Health and Safety at Work Regulations etc.
- 2.5.1 Provision and Use of Work Equipment Regulations 1998 (PUWER)
- 2.6 Approved Code of Practice Safe use of work equipment. Provision and Use of Work Equipment Regulations 1998 L22 HSE Books 2008 ISBN 9780717662951
- 2.7 The Lifting Operations and Lifting Equipment Regulations 1998 (LOLER 98)
- 2.8 Approved Code of Practice Safe use of lifting equipment. Lifting Operations and Lifting Equipment Regulations 1998.
- 2.9 Approved Code of Practice and Guidance. L113 HSE Books 1998 ISBN 0 7176 1628 2.
- 2.10 <https://www.hse.gov.uk/index.htm>
- 2.11 IAN 166 'Highways Agency Road Deaths Investigation Guidance' (or replacement document)
- 2.12 BS EN Standards
1. EN 1317 Road Restraint Systems
 2. BS EN 1317-1 Part 1: Terminology and general criteria for test methods
 3. BS EN 1317-2 Part 2: Performance classes, impact test acceptance criteria and test methods for safety barriers
 4. ENV 1317-4 Part 4: Barrier Systems: Terminals and Transitions - Performance classes, impact test acceptance criteria and test methods
 5. BS EN 1317-5 Part 5: Product requirements, and evaluation of conformity for vehicle restraint systems
 6. EN 1317-6 Part 6: Pedestrian restraint systems
 7. BS EN ISO 15607 Pedestrian parapet
 8. BS 7818 Specification for Pedestrian Restraint Systems in Metal
 9. BS 8118 Part 2 Structural use of aluminium – BS Specification for materials, workmanship and protection
 10. BS EN 1090 – Part 2 Steel, concrete and composite bridges – Specification for materials and workmanship
 11. BS EN 10160 Ultrasonic testing of steel flat product of thickness equal or greater than 6mm (reflection method). (Replacement for BS5996)
 12. BS EN ISO 15607 Specification and qualification of welding procedures for metallic materials.
 13. BS EN ISO 15609-1 Specification and qualification of welding procedures for metallic materials - Welding procedure specification - Part 1: Arc welding
 14. BS EN ISO 15614-1 Specification and qualification of welding procedures for metallic materials - Welding procedure specification - Part 1: Arc and gas welding of steels and arc welding of nickel and nickel alloys
 15. BS EN ISO 17637 Specification and approval of welding procedures for metallic materials – Welding procedure tests for the arc welding of aluminium
 16. BS EN ISO 9606 Part 1 Approval testing of welders for fusion welding – Steel
 17. BS EN ISO 9606 Part 2 Approval testing of welders for fusion welding – Aluminium and aluminium alloys and its alloys
 18. BS EN 970 Non-destructive examination of fusion welds – Visual Examination
 19. BS EN 1714 Non destructive examination of welded joint Ultra examination of welded joints
 20. BS EN ISO 9934-1 Non-destructive testing. Magnetic particle testing Part 1. General principles
 21. BS 6072 Methods for magnetic particle flaw detection

Note 1: Highways England may issue Technical Information Notes (TINs) as a prelude to inclusion in the MCHW (Vol 1 and 2), the DMRB and/or Chapter 8. Organizations must have

auditable processes in place to identify when these documents are issued and their implementation date(s). An index of Interim Advice Notes (IANS) is available on the internet. It is the responsibility of the organization to ensure they are working to the appropriate version.

2.13 Transport Scotland Trunk Road Condition Manual - April 2013 Pg. 46 - 50

Appendix C: Training and Assessment of Competence

1. Training and competency qualifications

The organization shall ensure that their employees have undergone suitable training and competency assessment that will cover aspects of the work to be undertaken as follows:

See clauses 7.1.2 and 7.2 Requirements for welding qualifications etc are set out in Clause 402 of the SHW (May 2017).

Inspection Personnel

Inspection personnel should hold the relevant qualification and as appropriate supplementary qualifications for the materials being inspected. (See Clauses 7.1.2 and 7.2).

2. Health and safety

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

Appendix D: Not used.

Appendix E: Guidance for the Control of Monitoring and Measuring Equipment

All equipment should be calibrated in accordance with manufacturers procedures traceable back to national standards in accordance with ISO 9001:2015.

Appendix F: Role of the Certification Bodies Accredited for this Sector Scheme

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

Information on certification bodies accredited against this scheme can be found currently on the UKAS website www.ukas.com. The search facility is not guaranteed to return accurate results and so the following process should be followed in full:

- place the cursor onto 'Find' box in the top right hand corner
- In the Search box under "Search Accredited Organisations" enter "National Highway Sector Scheme No10A" (including the inverted commas) (you can optionally also enter your Post Code)
- left click 'search'
- left click on 'Certification Bodies' - this then lists the certification bodies who may be accredited
- Click on the particular Certification Body you are interested in and review their Schedule of Accreditation to see whether their scope includes NHSS 10A (this should be towards the end of the Schedule of Accreditation). Note that this may be shown as a title only or a title with, for example, "Highway Sector Scheme No 10A".

Note 1: This process will not identify certification bodies that do not have "sector scheme No X" in their scope, but which may have only "NHSS X" or "sector scheme X". To complete the full list of accredited CBs it will be necessary to repeat the process (at least twice) by typing in "nhss X" or "sector scheme X" as appropriate at bullet point 3. 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.

Note 2: Advice on the current accreditation status of certification bodies to assess against this document should be sought from UKAS (Tel 001784 429000).

Note 3: Certification Bodies interested in being accredited by UKAS for this Sector Scheme should contact UKAS.

Note 4: Organizations currently registered to ISO 9001 with a UKAS (or equivalent) accredited certification body that does not 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 a UKAS accredited certification body for this scheme

Note 5: Advice on the current accreditation status of certification bodies to assess against this document should be sought from UKAS (Tel 01784 429000 or Email info@ukas.com).

Appendix G: The Role of Certification Bodies and Auditor Qualifications

1. Role of certification bodies

- 1.1. The independent assessment of conformity of organizations to the requirements of ISO 9001:2015 and 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 ISO 9001:2015 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 meetings of this 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 17021-1 by the United Kingdom Accreditation Service (UKAS) or an equivalent International Accreditation Forum (IAF) member for assessment and registration of ISO 9001:2015 quality management systems interpreted in accordance with this NHSS or other international management scheme.

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 this sector scheme 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 within the VRS industry, including the methods and techniques sufficient to understand the processes employed and the controls necessary to ensure delivery of conforming product and services. Typically, this would include knowledge of the product and processes including connections to different systems. (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 engineering background, capable of reading and understanding specifications and drawings, including knowledge of the

Specification for Highway Works and design standards requirements for this sector scheme.

- 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, installation, maintenance and repair in the specific aspects of the scheme as appropriate.
 - v. knowledge of constituent components, their properties and the performance of the installed system.
- 3.2. The certification body must also ensure that assessors have sufficient knowledge of health & safety requirements related to working in a factory environment.
- 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 ISO 9001:2015 Lead Auditor qualification or certification body equivalent and demonstrable expertise in leading assessment teams.
 - ii. ISO 9001:2015 assessment experience.
 - iii. knowledge, understanding and application of this SSD.
 - iv. knowledge of the manufacture, supply, installation, maintenance and repair in the VRS industry, including the methods and techniques sufficient to understand the processes employed and the controls necessary to ensure delivery of conforming product.
 - v. 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 this sector scheme.
 - vi. ability to demonstrate that they have ongoing suitable health and safety training which includes appreciation of the risks involved in the sector scheme activities and associated works.
 - vii. knowledge of constituent components, their properties and the performance of the installed system, (including metallurgy)

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 activities covered by the scope of this Sector Scheme are being undertaken from.

4.2 Certification Bodies shall make all reasonable endeavours 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 no greater than one year.

- 4.2. There may be occasions when a CB encounters an organization that wishes to expand and the scope is not included in the relevant NHSS. This may be due to the introduction of new technology or innovation. In such instances, the CB shall advise the SSAC of this and ask them to consider an extension of scope within the SSD. CB auditors should check a) that a person in the organization has been identified in the organization's procedures to be responsible for uploading the required information onto the Schedule of Suppliers, and b) that the password to edit/update the entry on Schedule of Suppliers is available and kept in a secure place."

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. (See also NHSS 0 scope of suites)
- 5.2. The National Highway Sector Scheme Logo shall be included in any Certificate of registration / approval 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.
- 5.3. Provisional requirements in respect of transition arrangements from NHSS 2B, 5A and 5B to NHSS 10 suite of documents shall be checked <https://www.ukas.com/technical-services/publications/publications-relating-to-certification-body-accreditation-3/>

6. National Highway Sector Schemes Schedule of Suppliers

- 6.1. Certification Bodies shall monitor the National Highway Sector Schemes Schedule of Suppliers posted at <http://www.scheduleofsuppliers.co.uk/> 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 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 the organization has recorded their NHSS registration on the Lantra Schedule of Suppliers web-based register (See 4.4 and 8.2.1 of this NHSS).
- 6.4. Certification bodies shall check that an organization's entry on the schedule of supplies is current prior to an assessment or surveillance visit.

7. Reporting on Sector Scheme Performance

- 7.1. Each Lead certification body shall provide to the Secretary of this scheme a summary report which

includes as a minimum:

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

Note 1: The report shall be available at least a week before each National Highway Sector Scheme Liaison Committee meeting (normally held each June/July and November/December), 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.

Note 2: the report may be a combined report prepared by the nominated certification body (Lead CB) to provide assurance that confidentiality is maintained.

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

Appendix G1: Guidance to Assessors' and Other Auditors' Competencies Requirements for National Highway Sector Scheme 10A

Section 1 - General Information

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 ISO 9001:2015 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.

Section 2 – Requirements

Note 1: This section of the guidance is divided in three parts namely 2a, 2b & 2c.

Note 2: Section part 2c has been developed by the sector scheme committee to identify all relevant knowledge of their industry that is pertinent to carrying out an audit.

2a General background to the NHSS 10A

Assessors and auditors shall be familiar with the requirements of this NHSS and the contents of this SSD as well as any relevant documents referenced. For example, assessors and auditors should have knowledge of relevant international, European and British standards for the scope of work covered by this NHSS; in particular those relating to product conformity, type testing and their requirements; familiarity with SHW, notes for guidance for the SHW, (including when these are updated), the Design Manual for Roads and Bridges and Interim Advice Notes issued by the Highways England.

2b Summary of where the scheme defines the requirements of sections 4 to 10 of ISO 9001:2015

The summary provides a list of those clauses where interpretation has been provided these are indicated by “Y” in the table.

Additionally, in the “comments/requirements” column information is provided for use by assessors when assessing an organization. This information is guidance providing an indication of priority. SSACs should review these requirements to ensure they relate to their industry, and as relevant provide further bespoke requirements befitting to their industry.

Section/Clause	Particular Requirement Yes/No	Comment/Requirement
4. Context of the organization		
4.1 Understanding the organization and its context	Y	Check annually that the organization has determined issues relevant to its purpose and strategic direction and has monitored and reviewed the information. Especially check and seek evidence relating to external context
4.2 Understanding the needs and expectations	N	Check annually that the organization has determined interested parties, their requirements and is monitoring

of interested parties		and reviewing the data. Seek evidence.
4.3 Determining the scope of the quality management system	Y	Check annually the availability and suite of scopes of the relative elements of the NHSS that the organisation considers apt. (See Annex 1, appendix G clause 5.3, Appendix K and NHSS 0 Suite of Scopes). Check documented information.
4.4 Quality management system and its processes (4.4.1) (4.4.2)	Y	Check annually by the CB Auditors and other Auditors. Schedule of Suppliers website to ensure registration is current. Check up-loaded information is current.
5. Leadership		
5.1 Leadership and commitment		
5.1.1 General	Y	Check policy documented information. Ensure that policy is being correctly implemented, communicated and understood. Seek evidence.
5.1.2 Customer Focus	N	Ensure that the organization has determined all necessary applicable statutory and regulatory requirements for both legal and contract compliance. This may include supplementary services such as recycling, final disposal, equipment inspection, licensing requirements for driving (HGV), Health & Safety etc.
5.2 Policy		
5.2.1 Establishing the Quality Policy	Y	Ensure objectives are covered in the quality plan and in policy documented information.
5.2.2 Communicating the Quality Policy	N	Ensure that policy documented information is available as necessary and is being communicated, implemented and understood. Seek evidence.
5.3. Organization roles, responsibilities and authorities	Y	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. Ensure that the organization's management have appointed a member/s with the appropriate responsibility and authorities - Seek evidence.
6. Planning		
6.1 Actions to address risks and opportunities (6.1.1) (6.1.2)	Y	Seek evidence that documented information is in place to address risk and opportunities and is operational.
6.2 Quality objectives and planning to achieve them (6.2.1) (6.2.2)	Y	Check documented information is in place and meets requirements. Seek evidence that quality planning is in place and evaluated. See Appendix A.
6.3 Planning of changes	N	Check whether QMS has been changed.
7. Support		

7.1 Resources	N	Ensure contract/tender review is in place. Review provisions of resources to confirm they are suitable and include providing the defined personnel for contracts.
7.1.1 General	N	
7.1.2 People	Y	See Appendices A and C.
7.1.3 Infrastructure	N	Review facilities and process equipment to confirm they are suitable for the scope of registration.
7.1.4 Environment for the operation of processes	N	In process audit. Checks to include environmental condition records, plant maintenance sheets, access equipment certification and induction records.
7.1.5 Monitoring and Measuring Resources		
7.1.5.1 General	Y	See Appendix E
7.1.5.2 Measurement Traceability	Y	See Appendix E
7.1.6 Organizational Knowledge	Y	Seek evidence
7.2 Competence	Y	There is a legal requirement on employers to ensure their employees remain competent. This may be demonstrated by the employer ensuring that the individual has undertaken appropriate training and assessment.
7.3 Awareness	N	Seek evidence
7.4 Communication	Y	Check internal and external communication processes have been established.
7.5 Documented information		
7.5.1 General	Y	Check processes are in place to ensure that the organization maintain up to date information on documented information. (See Appendix B for external documented information). Check Quality Plan is in place and complies with 7.1. If necessary, obtain a copy of the plan as evidence. Check processes are in place to ensure that organizations maintain up to date information on reference documentation (in Appendix B) In particular check the organization has & uses the correct specification criteria for specific contract.
7.5.2 Creating and Updating	N	Ensure that all required contract specific documents are in place. Seek evidence.
7.5.3 Control of Documented Information (7.5.3.1) (7.5.3.2)	Y	Ensure that all required contract specific documents are in place. Seek evidence. Check appropriate processes are in place for the retention and disposition of documented information.
8. Operation		
8.1 Operational planning and control	Y	Check quality plan is in place and complies with 7.5. If necessary, obtain a copy of the plan as evidence. (See Appendix A). Check appropriate processes are in place for the retention and disposition of documented information.
8.2 Requirements for products and services		

8.2.1 Customer Communication	Y	Check effectiveness of communication arrangements.
8.2.2 Determining the Requirements for Products and Services	Y	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), Health and Safety etc. Check the organizations ability to meet defined contract requirements.
8.2.3 Review of the requirements for Products and Services (8.2.3.1) (8.2.3.2)	N	Ensure enquiry review is in place with an appropriate timescale and assessment of availability of resources.
8.2.4 Changes to requirements for Products and Services	N	
8.3 Design and development of products and services		
8.3.1 General	Y	Ensure enquiry review is in place
8.3.2 Design and development planning	Y	See Annex 1 and Annex 2.
8.3.3 Design and development inputs	Y	
8.3.4 Design and development controls	N	
8.3.5 Design and development outputs	N	
8.3.6 Design and development changes	N	
8.4 Control of externally provided products and services		
8.4.1 General	Y	Ensure or seek evidence that documented information is in place for externally provided product and services to meet specified requirements. Ensure or seek evidence that records are in place. Check that relevant suppliers are Sector Scheme compliant (see terms & definitions of this document).
8.4.2 Type and Extent of control	Y	Seek evidence that documented information is in place. Seek evidence of effective controls Where relevant check that Declaration of Performance matches contract requirements. (for mechanical fasteners see SSD 3) Check inspection records are in place and any defects have been rectified and recorded. Seek evidence that documents are in place.
8.4.3 Information for External Providers	Y	Seek evidence that purchasing requests are adequate
8.5 Production and service provision		
8.5.1 Control of	Y	The organizations shall include activities and services

Production and service provision		as shown in Annex 1 with regards to production and service provision.
8.5.2 identification and traceability	Y	Where there are legislative and/or contractual requirements, there must be an auditable process of document retention which can be clearly identified and traced.
8.5.3 Property belonging to customer for external providers	Y	Seek evidence that documented information is in place.
8.5.4 Preservation	Y	Cover during procedure review. Seek evidence as appropriate.
8.5.5 Post-delivery activities	Y	
8.5.6 Control of Changes	N	Check documented information is in place.
8.6 Release of products and service	Y	Check that monitoring and measuring process documentation has been implemented in line with the current contract specification. Seek evidence.
8.7 Control of nonconforming outputs (8.7.1) (8.7.2)	Y	Ensure processes are in place and has been implemented in line with contract specification. Check documented information.
9. Performance evaluation		
9.1 Monitoring, measurement, analysis and evaluation		
9.1.1 General	N	Check planned results. Check that monitoring and measuring process documentation has been implemented in line with the current order specification. Seek evidence. Review copy of annual management review. Ensure this contains continuous improvements to the relevant sector scheme.
9.1.2 Customer satisfaction	N	Ensure customer feedback documents are in place on completion of the order. Seek evidence that organization is meeting and maintaining customer requirements.
9.1.3 Analysis and Evaluation	N	Check processes are achieving planned results. Check analysis of data has provided information to demonstrate effectiveness of QMS and evaluation of continued improvement.
9.2 Internal audit (9.2.1) (9.2.2)	Y	Check internal audits are being carried out by competent people and ensure corrective actions have been made and meeting customer requirements.
9.3 Management review		
9.3.1 General	Y	Review copy of annual (or six monthly) management review. Ensure this contains reference to the relevant sector scheme.
9.3.2 Management review inputs	N	
9.3.3 Management review outputs	N	Seek evidence that the output and actions are considered by top management at regular intervals.
10. Improvement		
10.1 General	N	Check effectiveness of improvement.
10.2 Nonconformity and	N	Seek evidence that documented information is in place

corrective action (10.2.1) (10.2.2)		and operational.
10.3 Continual improvement	N	

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 ISO 9001:2015 (latest issue), a CB assessor or internal auditor should be aware of the following when completing an audit: -

- C1 - Safe Working Practices
- C2 - Training, qualifications and assessment of competency
- C3 - Maintain equipment
- C4 - Public protection
- C5 - Environment
- C6 - Testing/inspection/workmanship
- C7 - Health and Safety
- C8 - Equal Opportunities

C1 Safe Working Practices

- Correct Personal Protective Equipment Worn
- Equipment approved and suitable for use
- Personnel 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 card
- Vehicles/loads are inspected and drivers are qualified
- Awareness of relevant H&S requirements as applicable to this scheme

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 this NHSS
- Been inducted on site specific H&S issues. (Daily if necessary)
- Hold the relevant skills card

C3 Maintain Equipment

- Relevant personnel are aware of LOLER and PUWER requirements
- Maintenance checklists are available and have been completed on a daily basis

C4 Public Protection

- Personnel are aware of the need to protect public
- Personnel have identification
- The organization(company) has a complaints procedure in place

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

C5 Environment

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

C6 Inspection/Testing/Workmanship

Auditors should be aware of the importance of inspection and testing of the product and have knowledge of the relevant tests and the information provided by the tests.

C7 Health and Safety

Auditors should be aware of the Health and Safety at Work etc. Act 1974 and associated Health and Safety Legislation, as it applies to this sector scheme and customer H&S requirements.

C8 Equal Opportunities

Assessors/auditors should be aware of and understand the need for effective diversity management, including the implementation of equal opportunities and avoidance of disability discrimination as it applies during the provision of services. Assessors/auditors should understand what is involved and how it can be encapsulated in company procedures.

Appendix H: Organization Acceptance and Guidelines for New Entrants

1. Organization Acceptance

- 1.1 For work carried out for roads managed by Highways England, Welsh Government, Transport Scotland and Transport Infrastructure Ireland, only those organizations holding a valid Certificate of registration / approval 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 for roads managed by other highway authorities, acceptance of the organization will depend on the requirements of the contract.

2. Guidelines for New Entrants - Requirements

- 2.1 Organizations must have the required experienced and qualified personnel 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, , the organization shall record their registration to this sector scheme on the Schedule of Suppliers website www.scheduleofsuppliers.co.uk upon receipt of the certificate issued by their certification body to confirm their registration and thereafter check its suitability annually.

3. Trade Associations

- 3.1 Membership of a trade association is not a requirement of this Sector Scheme. However, there is a relevant trade association associated with the industry:

Vehicle Restraint Manufacturing Association (VRMA)

Appendix J1: Feedback to Committee

Use of Form Appendix J1:

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

Secretariat
Sector Scheme Advisory Committee for VRS
C/o Lantra
Stoneleigh Park
Nr. Coventry
Warwickshire
CV8 2LG

Issue Identified:

Suggested Action:

Name:
organization:
Address:

Contact details:

Date:

Note: J1 forms will be sent on receipt by Lantra to the scheme chairmen for consideration. In many instances, J1 forms can be responded to without the need for them to be considered by an NHSS committee, those requiring a more detailed response will be dealt with at the next meeting of the committee as part of the review of the document. If the J1 form contains information that is critical, then exceptionally action can be taken prior to the meeting by the chairperson for instance by arranging an extraordinary meeting of the NHSS advisory committee. The secretary will normally advise the originator of receipt of the J1 document and when the next meeting is expected to be held.

Appendix J2: Feedback to Certification Bodies and/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 organization. In the event that the matter cannot be satisfactorily resolved written complaints should be made to the organization's certification body, detailing the problem identified.

(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) organization Identified as being awarded the contract or

 - iii) Both i) and ii) above

- c) organization raising feedback / issue
Name:

organization:

Contact details (Address, email address, telephone etc.)

- d) Date: Signed:

Highways England Roads/Contracts – Route for Feedback

Feedback should be sent by email to Standards_Enquiries@highwaysengland.co.uk

Other Highway Authorities and Clients

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

Advice about reporting a complaint about the application of the health and safety recommendations related to a specific incident is available at <http://www.hse.gov.uk/contact/workplace-complaints.htm>

Appendix K: The Interpretation of Certificates Issued by Certification Bodies

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

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

As a minimum, a valid CoR will contain the following information (see also Annex 1):

- The scope of registration including specific registration to ISO 9001:2015 and this NHSS including the scheme title and category(ies) (see below and Annex 1)
- 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 10A and any applicable categories with associated typical sub-categories where applicable
- Logos for the NHSS, UKAS (or equivalent) and the CB
- The name and address(es) of the organization
- The validity of the certificate (3 years for ISO 9001*)
- A unique reference number/code
- The signature of a relevant CB official with his name and title

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

Note: The Certificate will state the category(ies) of work that the holder is competent to supply.

Note: The Certificate of registration / approval must identify the NHSS(s) by number as well as by category and sub-category.(See also NHSS 0 Suite of Scopes (<https://www.scheduleofsuppliers.co.uk/node/64>))

Title	Primary Categories	Secondary Categories
The inspection of existing	Metallic legacy VRS (Barriers and/or Parapets) Terminals Transitions Gates Other	Proprietary products (where authorised) Non proprietary products
The design of partial replacements of		
The procurement of replacement parts for		
The manufacture of replacement parts for		
The material testing of replacement parts for		
The supply of replacement parts for		

The following shows a typical Certificate / Appendix to Certificate with the key required elements therein:

Note: * denotes that this element may appear on an Appendix to a Certificate

[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

BS EN ISO 9001:2015 AND THE FOLLOWING NATIONAL HIGHWAY SECTOR SCHEMES

For the following scope of registration*
*[List of appropriate highways related works]**

National Highway Sector Schemes*
*[Sector Scheme number, Title and Organizational Scope]**
*[Sector Scheme number, Title and Organizational Scope]**
*[Sector Scheme number, Title and Organizational Scope]**

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.]**

Appendix L: Guidance for Clients (Highways Authority)

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. It is necessary for the Client to ensure that all those involved in carrying out the works 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 this scheme.
- 2.2. Clients/Customers shall require confirmation of compliance with the Contract Specification of the original product. In respect of the supply of services, products or materials the customer 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)
- 2.3. 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/skills cards.
- 2.4. The Schedule of Suppliers Management Team have established and manage a schedule of registered companies that have been registered to National Highways Sector Schemes; access to the schedule is obtained by logging on to the Lantra website <http://www.scheduleofsuppliers.co.uk>. However, it should be noted that only those companies that register on the schedule are listed. Clients should contact Lantra by email at nhss-highways@lantra.co.uk to ascertain/check the status of company if it is not listed on the schedule.
- 2.5. Clients and customers should consider the need for independent inspection of the installed product.
- 2.6. The Highway Authority checklist (Client)

Pre-Contract/Sub-contract Award

1. Is the organization listed on the schedule of suppliers website?
2. Is there an ISO 9001 certificate present?
3. Does the ISO 9001 certificate cover NHSS 10A?
4. Is the Certification Body that issued the certificate accredited by UKAS for ISO9001?
5. Is the Certification Body that issued the certificate accredited by UKAS for assessments to NHSS 10A?
6. If the answer to 4 or 5 is No – is the accrediting body equivalent to UKAS?
7. Does the scope of works of the ISO 9001 certificate, including NHSS 10A cover the actual works intended to be carried out under the contract?

Post Contract Award

9. Assess ongoing performance of the organization (including sub-contractors) in relation to the scope of the works.
10. Is the organization intending to sub-contract any of the works?

If the answer to 10 is Yes – repeat Question 1 – 9 for that organisation.

3 Road Death Investigation

Attention is drawn to the NPCC (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
- g) Inspection/Certificates records

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

Highways England have produced Interim Advice Note 166 which provides guidance on road death investigations.

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:

- <http://www.hse.gov.uk/contact/index.htm>

Appendix M: Guidance for organizations

Not Used

Appendix N: Guidance for organizations Registered to Another NHSS

Not used

Appendix O: How to Register on the Schedule of Suppliers

Lantra hosts the register of organizations on their website <http://www.scheduleofsuppliers.co.uk/>. This is a self-registration list and it is a requirement of this scheme that organizations register their details on this website and keep them up to date; Certification Bodies will check that the organization is registered on the website together with all relevant information, including a pdf copy of the certification of registration that the Certification Body issues and any other specific documentation to be uploaded specified by this SSD, prior to annual and surveillance visits

The process for registering on the Schedule of Suppliers is as follows:

1. Go to the Lantra Awards Schedule of Suppliers website:
<http://www.scheduleofsuppliers.co.uk/>
2. Select "Get on the Schedule of Suppliers" or "Register now"
3. Enter the details required, including selecting the Sector Schemes that your organization operates, the Highways England Areas you cover, your certification body and the scopes of the schemes you are registered to for as per your certification body registration certificate
4. Upload a PDF copy of your ISO 9001 certificate(s) extended to include your NHSS registration and any other specific documentation to be uploaded as specified by this SSD
5. Submit your registration

Lantra Awards will check that the relevant document(s) have been uploaded (see note 1) and that the registration details (see note 2) have been filled in. Once complete the information will be published and appear on the Schedule of Suppliers website and will be searchable.

Note 1: It is the responsibility of companies registering on the site to enter their own details and data which would then be checked by certification bodies during any subsequent company audit. Lantra Awards do not check the content of the records going onto the site and accept no liability for the information being entered. However, Lantra Awards will continue to check that your company ISO certificate (also HERS certificate if registering for NHSS 8) has been uploaded before approving the registration.

Note 2: Your certification body Assessor should check your entry prior to each surveillance or assessment visit to you to ensure that you have recorded your registration and the details are correct.

Note 3: You should review/update your registration (It is recommended that this done annually).

Note 4: Where work is contracted to a public body (e.g. a local highway authority acting for example as a "Contracting Authority"), or where there is a business restriction in place limiting the extent where a local highway authority operates, the NHSS registered organization (highway authority) when completing their registration should under the section "Business Summary" state that "Works carried out are only within the area of the [highway] Authority for in-house requirements only" or as a "Service provider to", and under the section for "Business Description" provide the statement "Local Government trading account" or similar text. In this instance it would not be appropriate for the NHSS registered organization to complete the section "What areas do you cover?".

Note 5: Any queries should be sent to the SoS team at scheduleofsuppliers@lantra.co.uk

Appendix P: Not used.

Appendix Z: Document Control (Previous Issues)

Previous SSD Issue Statement (NHSS5A)

Issue Statement Issue Date Issue 1 17 November 03 Issue 2 August 2004 Issue 3 April 2005 Issue 4 June 2008 Revisions

August 2004

Implementation of UKAS issue 2 added

Section 4 – Introductory foreword modified

Clause 6.2.2(ii) Welder Qualifications para 1 clarified to align with BS EN 287

Clause 6.2.2(ii) Inspection Personnel para 1 Insert “body” after “equivalent” in line 4

Clause 7.5.1 (vii) Parapet Installation Criteria paragraph 2 extended

Appendix F - updated

April 2005

Implementation of UKAS issue 3 added

Introduction amended to reflect changes made to document

Scope amended to allow for inclusion of fabricators that do not carry out product design and clarified in respect of cast in place parapets

Section 3 – definitions added for application design and product design

Clause 4.1 expanded to include requirements for registration

Clause 5.6 clarified

Clause 6.2.2 (ii) updated including reference to requirement for BS EN 473

Clause 7.1 expanded to integrate management plans

Clause 7.2.2. Note added regarding verification of technical requirements

Clause 7.3 divided into two: part A for product design and part B for application design

Clause 7.4 clarification

Annex 1 updated Appendices B, C, F and J1 amended

Appendix G Clauses 1.1, 2.6 and 2.7 modified

Appendix K added

June 2008

Amendments to: Composition of SSAC

Selection of Certification Body

Introduction

Scope

Normative Reference

Appendices B, C, F, G, J1, J2 & K

Added:

Appendices G1, L & M

Previous SSD Issue Statement (NHSS 10A)

April 2020

ISO 9001:2015 issue 1.0 – Updated to revised ISO9001:2015