



National Highways Sector Schemes for Quality Management in Highway Works

2C

For the design, supply installation and repair of
environmental barriers (structural) for
Infrastructure Works

**Published by the Sector Scheme Advisory Committee for
Environmental Barriers (Structural) (SSACEBS)**

DOCUMENT CONTROL

Issue statement.

Issue UKAS 1: April 2004
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Issue UKAS 3: July 2009

This Sector Scheme Document (SSD) evolved from SSD2A.

The significant changes and additions between 2 and 3 are noted below:

Implementation (notes added)

1.0 Scope
2.0 Normative Reference
3.0 Terms and Definitions (Diploma)
6.2.2 Competence Awareness and Training – amendment of organization flowchart
7.1 Planning of Product Realization
8.2.1 Customer Satisfaction
8.2.2 Internal Audit
Appendix A – Item 2, Item 4, Item 7, Item 8
Appendix C – Temporary Traffic Management and other qualification clarifications
Appendix G amended
Appendix G1 added
Appendix J2 Modified
Appendix K amended to align with scope
Appendix L added

“Example of text amendment:

(Mm/yy) This Sector Scheme is one of the series of NHSSs, which are bespoke integrated management schemes within an ISO 9001:2008 framework that have been developed to interpret BS EN ISO 9001:2008 as it applies to a particular activity/industry within the United Kingdom.”“

Revisions

Revisions to this document relating to the previous issue are described on this page in general terms. The Sector Scheme Advisory Committee will determine whether the notes for any other particular version are to be retained for a longer period.

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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

BM Trada Certification Limited

BSI

County Surveyors Society

Environmental Noise Barrier Association (ENBA)

Fencing Contractors Association Ltd

Highways Agency

Lantra Awards

Lantra SSC

Lloyds Register Quality Assurance Limited

National Quality Assurance Limited

Network Rail

SGS UK Ltd

Society of Chief Officers of Transportation in Scotland

^(07/09) **Corresponding Members**

DRD(NI)

Transport Scotland

Welsh Assembly Government

Exclusion of liability

The Advisory Committee:

(i) Have and accept no liability whatsoever for any failure of any system or systems assessed under this SSD or for the quality, fitness for purpose, or safety of any product or service which is the subject of assessment;

(ii) Do not provide any representation as to any aspect of any such system, product or service, and,

(iii) Hereby expressly exclude all and any liability or responsibility (however alleged to arise) for or in connection with the provision of any service or product or any use of any product, all and 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 only certification bodies accredited by UKAS (or their equivalent) are permitted to certificate companies to this scheme, as described in Appendix G.

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 assurance certificate issuer and that specific reference is made to this Sector Scheme.

Implementation of Issue 3

This document takes effect from the date of publication and posting on the UKAS website.

^(07/09)Note 1: Following publication of the document the organization should implement the changes in time for their surveillance visit or assessment visit by the Certification Body.

^(07/09)Note 2: The Certification Body should assess the organization against the latest edition of the scheme within 14 months of its publication.

^(07/09)Note 3: Where the surveillance/assessment visit of an organization occurs within two months of the publication of a revision, such assessment maybe undertaken against the previous edition subject to compliance with Note 2 above.

INTRODUCTION

(i) This Sector Scheme Document describes the quality management system requirements for Environmental Barriers (Structural) (EBS), which are to be established and maintained by the Organizations supplying and installing Environmental Barriers products for projects procured by infrastructure providers. It should be read in conjunction with relevant International, European and British Standards, other legislative requirements and reference material applicable.

(ii) It is important that Main Contractors and Clients, when assessing tenderers for the supply and installation of EBS ensure that tenders meet the SSD requirements and are registered to this sector scheme by a Certification Body accredited by UKAS or equivalent.

(iii) This SSD encompasses the following:

- Scope, definitions, certification of registration and quality system requirements for companies working in their chosen sector.
- Model requirements for Quality Plans and details of reference material applicable to each sector.
- Design and installation competence requirements.
- An example of an in-house register, which must be maintained by, companies to show their designated lead environmental barriers (structural) installers and designers.
- Details of the role of Certification Bodies and Auditor qualifications.
- Guidelines and requirements for new entrants wishing to work in the sector.
- Observations or feedback forms relating to the SSD or the process described herein for feedback to the committee.

(iv) Users of this Sector Scheme shall specify other relevant National Highway Sector Schemes as appropriate to the nature of work being undertaken, e.g. National Highway Sector Scheme No 4 Natural and Conferred Durability of Timber and National Highway Sector Scheme 2B Vehicle Restraint Systems.

^(07/09) (v) Where temporary traffic management is required organizations should employ a relevant National Highway Sector Scheme 12 registered company. For works on rural and urban roads the organization may employ skilled registered temporary traffic management operatives qualified to meet the requirements of NHSS12D appropriate to contract requirements and risk assessments.

(vi) The certification of registration shall include the type, subtype and element of environmental barriers (structural) as appropriate. Please see Appendix K for example.

(vii) This SSD is a live document maintained and updated by the SSACEBS which intends to meet two or three times a year to develop it appropriately. The scope of training and competency for fencing installers including EBS installers is determined through the Fencing Industry Group of Lantra SSC which has responsibility for the development of the fencing industry.

(viii) A liaison committee oversees all the SSD committees to ensure they operate to a common format.

(ix) Any observations or complaints relating to the SSD or the process described herein should be made by completing the feedback forms, see Appendix J.

^(05/09) **INTERPRETATION OF BS EN ISO 9001 : 2008**

1.0 SCOPE

This SSD describes the management system requirements to be established by Organizations providing design, supply, installation and repair of Environmental Barriers (Structural). The document interprets the requirements of British Standard BS EN ISO 9001 : 2000 and should be read in conjunction with that standard. The SSD is applicable to Organizations carrying out the design and/or supply installation and repair of

(a) Environmental Barriers (Structural) and

(b) Vehicle Restraint Systems where attached.

The SSD shall be referenced in the Certification of Registration see Appendix K which shall state the category and level of assessed capability.

Where applicable organizations are also required to be registered to the SSD2B to work on VRS/EBS combined systems.

2.0 NORMATIVE REFERENCE

The following normative documents contain provisions which constitute provisions of BS EN ISO 9001 : 2008:

BS EN ISO 9000 : 2005 Quality Management Systems – Fundamentals and Vocabulary

BS EN ISO 9004 : 2000 Quality Management Systems – Guidelines for Performance Improvements

^(07/09) BS EN 1793 – 1 Road Traffic Noise Reducing Devices – Test Method for determining acoustic performance

Part 1 Intrinsic Characteristics of Sound Absorption

Part 2 Intrinsic Characteristics of Airborne Sound Insulation

Part 3 Normalized Traffic Spectrum

BS EN 1794 Road Traffic Noise Reducing Devices – non acoustic performance

Part 1 Mechanical Performance and Stability Requirements

Part 2 General Safety and Environmental Requirements

3.0 TERMS AND DEFINITIONS

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

Certificate of Registration	^(07/09) A Certificate issued by a UKAS or equivalent accredited certification body certifying that the holder operates a Quality Management System complying with BS EN ISO 9001 : 2008 and with this SSD see Appendix K.
Client	The body for which work is being carried out.
Components	All necessary elements, including fastenings, which separately and together are necessary to create an environmental barriers (structural) as required.
Contract	The agreement between the Organization and the Customer governing the provision of the Works to which this SSD relates.
Contract Supervisor	The person responsible for the supervision of the Environmental Barriers (Structural) installation. The Contract Supervisor could be responsible for a number of contracts and is not always necessarily on site.
Customer	The body engaging the Organization for the purpose of work described in this SSD. This may be the main contractor where the Organization is a sub-contractor.
Designer	The company/person/authority responsible for converting requirements into design output in the form of drawings, calculations, specifications, plans, instructions etc.
Design Development	Set of processes that transform requirements into specified characteristics or into the specification of a product, process or system. (Ref. ISO 9000 : 2005 3.4.4).
Diplomas ^(07/09)	Are qualifications developed through the Qualifications and Credit Framework (QCF) and will supersede NVQs when they are up for revision. See Appendix C
Environmental Barriers (Structural) EBS	Environmental barriers (structural) covers all types of constructed environmental barriers excluding earth barriers.

Environmental Barriers (Structural) Installer	A person who works under the control of a Lead Environmental Barriers (Structural) Installer and is a skilled EBS Installer/Repairer (see Appendix C).
Environmental Barriers (Structural) Operative	A person who works under the control of a Lead Environmental Barriers and is a competent (not skilled) EBS Operative (see Appendix C).
FISS/CSCS	Fencing Industry Skills Scheme/Construction Skills Certification Scheme – joint national skills card registration scheme.
Infrastructure Provider	Client Organization – see Client.
Lead Environmental Barriers (Structural) Installer	The person responsible for the correct installation and supervision of key elements on the barrier installation in accordance with given instructions. S/he is a skilled EBS installer (see Appendix C) and appointed by the company as a designated LEBS Installer/Repairer (see Appendix D). The LEBS Installer is in charge of the gang, reports to the Contracts Supervisor and will always be on the site during the installation process.
LA	Lantra Awards.
NVQ	National Vocational Qualification – a vocational qualification approved by the Qualification Curriculum Authority
Organization	The organization undertaking design and/or supply, installation and repair of environmental barriers (structural).
Quality Plan	The document setting out the specific quality practices, resources and sequence of activities defined in the Contract. (See appendix A).
SHW	The Highways Agency's Manual of Contract Documents for Highway Works Volume 1: The Specification for Highway Works (and any subsequent amendments) published by The Stationery Office (formerly Her Majesty's Stationery Office).
SSACEBS	Sector Scheme Advisory Committee for Environmental Barriers (Structural).
SVQ	Scottish Vocational Qualification

Scheme	The systematic arrangement for incorporating Quality Management into the work described in the contract.
'shall'	Used to indicate a requirement strictly to be followed in order to conform to the standard and from which no deviation is permitted. (See ISO Directives Part 3 : 1997, Annex E; reference 'Guidance on terminology used in ISO 9001 : 2000 and ISO 9004 : 2000'.)
Supply (including that from an external registered source)	To provide [environmental barriers (structural)] in accordance to British Standards, specifications, drawings and other Sector Schemes referred to in the contract.
UKAS	United Kingdom Accreditation Service

QUALITY MANAGEMENT SYSTEM REQUIREMENTS

Introduction

^(07/09) Paragraph numbers in sections 4 to 8 below refer to the relevant paragraph numbers in BS EN ISO 9001 without further qualification. The interpretation given below are to assist in the clarification of the ISO 9001 text, no inference should be made for ISO 9001 requirements are diluted or deleted because of this interpretation.

Where 'no specific interpretation' is recorded under a heading this means that it is not considered necessary to provide an interpretation for that clause.

4 QUALITY MANAGEMENT SYSTEM

4.1 General requirements^(07/09)

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

The organization shall notify and provide evidence of conformity to this scheme to the Schedule of Suppliers via Lantra Awards (Lantra House, Stoneleigh Park, Coventry, CV8 2LG) and the Secretary of the Sector Scheme of their registration to this scheme immediately following confirmation from the certification body and thereafter annually. In addition the organization shall provide details of a focal point for the organization.

4.2 Documentation requirements

4.2.1 General

Quality Plans are required for all contracts being carried out. When requested, the Organization shall submit a Quality Plan to the Customer for approval by the Customer prior to the commencement of the work (see Appendix A).

4.2.2 Quality manual

No specific interpretation.

4.2.3 Control of documents

No specific interpretation.

4.2.4 Control of records

See point 5 in Appendix A.

5 MANAGEMENT RESPONSIBILITY

5.1 Management commitment

No specific interpretation.

5.2 Customer focus

The Organizations should consider the interests of the Client and the product end users, for example, the general public / travelling public; and shall be mindful of the Client's interaction with the end users.

5.3 Quality policy

^(07/09)The Organization's quality policy statement shall include a statement of commitment to this Sector Scheme.

5.4 Planning

No specific interpretation.

5.5 Responsibility, authority and communication

Management and communication systems shall be maintained to ensure customer requirements are adequately and accurately communication to staff carrying out the work. The Contract Supervisor is responsible for the Contract.

5.5.1 Responsibility and authority

No specific interpretation.

5.5.2 Management representative

No specific interpretation.

5.5.3 Internal communication

No specific interpretation.

5.6 Management Review

5.6.1 General

For the purposes of this Scheme, this shall be at intervals not exceeding six months.

5.6.2 Review input

No specific interpretation.

5.6.3 Review output

No specific interpretation.

6 RESOURCE MANAGEMENT

6.1 Provision of resources

No specific interpretation.

6.2 Human resources

6.2.1 General

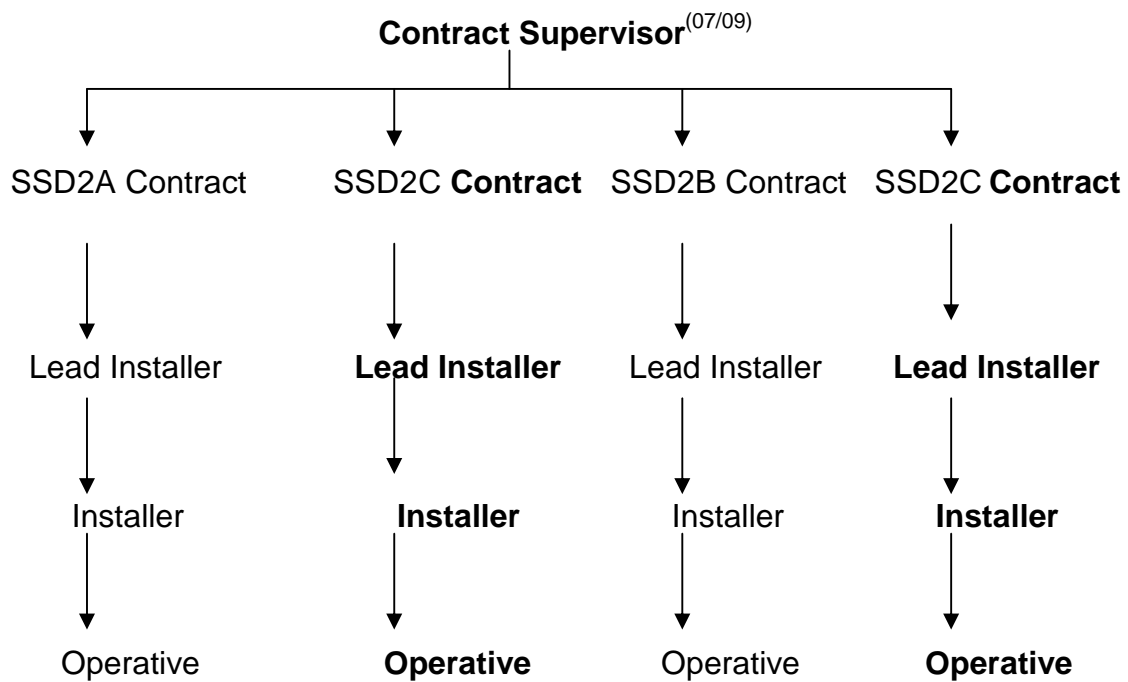
The training and assessment of operatives required by this scheme is aimed primarily at technical competence for the installation of fencing. It is intended to provide awareness to carry out work in a safe manner however it remains the responsibility of the organization to determine and implement safe systems of work.

6.2.2 Competence awareness and training

Organizations must meet the scheme requirements and ensure all their installers and team members are registered and working towards relevant qualifications mentioned in the FISS/CSCS registration scheme. A copy of the FISS/CSCS leaflet, which details all the requirements, is available from Lantra Awards. A brief outline of these categories and contact address is detailed in Appendix C.

Structure of the Installation Team for Environmental Barriers (Structural)

^(07/09) Organization flowchart showing an example of fencing installation teams managed by a Contract Supervisor :



6.3 Infrastructure

No specific interpretation.

6.4 Work environment

No specific interpretation.

7 PRODUCT REALIZATION

7.1 Planning of product realization

The Planning of product realization shall be recorded in a Quality Plan. The Quality Plan may be a largely standard document as indicated in Appendix A in conjunction with “contract specific” information.

^(07/09)The Quality Plan shall not be considered in isolation. An integrated approach shall be taken which links the Quality Plan, Environmental Plan (including protected sites), Sustainability Plan and the Health and Safety Plan (including risk and hazards assessments) together. Management of the service as whole is reliant on quality and hence the contract and the quality element cannot be separated, as one cannot function without the other.

^(07/09)The Organization, shall, in order to reduce the need for waste disposal, minimise the generation and environmental impact of waste arising during the contracted works and shall maximise the opportunities for the re-use and recovery of waste. The Organization shall document its arrangements for the identification, segregation, handling, storage and disposal of the different types of wastes arising from the contracted works.

7.2 Customer related processes

7.2.1 Determination of requirements related to the product

No specific interpretation.

7.2.2 Review of requirements related to the product

No specific interpretation.

7.2.3 Customer communication

- (i) The Customer needs to be informed about the products, that is, they require detailed information as appropriate regarding materials, components, manufacturing details etc. for the purposes of:
- (a) as-built records for maintenance/health and safety requirements.
 - (b) for their own monitoring of the effectiveness/performance of the product.

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

- (ii) The Organization shall determine and implement arrangements to demonstrate that timber and timber products, where used, come from legal and managed sustainable sources. This shall include provision of third party certification to the Client.

7.3 Design & development

^(07/09)The records of the verification (see sub-clause 7.3.5 Design and Development Verification) and validation (see sub-clause 7.3.6 Design and Development Validation) processes shall include information to demonstrate compliance with the contract specification irrespective of whether the customer expressly requests it or not.

^(07/09)The other sub-clauses within this heading require no specific interpretation.

7.3.1 Design and development planning

The Organization shall take note of the relevant requirements of the Reference Documents as scheduled in Appendix B.

The design and development planning processes shall include but not be limited to

- site assessment
- site constraints
- post design
- rail design
- foundation design
- fixings design
- design risk assessments/CDM regulations

7.3.2 Design and development inputs

Where the contract prescribes levels of acoustic performance they will be designated in accordance with the ratings as detailed Annex 2.

7.3.3 Design and development outputs

No specific interpretation.

7.3.4 Design and development review

No specific interpretation.

7.3.5 Design and development verification and validation

7.3.6

The Organization shall identify within the quality plan the verification and validation processes being adopted to ensure compliance with the contract (specification).

The records of the verification and validation processes shall include information to demonstrate compliance with the contract (specification) irrespective of whether the customer expressly requests it or not.

The Organization shall ensure the technical approval process relating to the design is implemented in accordance with the contract requirements.

An example of an Approval in Principle (AIP) form is given in Annex 1.

7.3.7 Control and design and development changes

No specific interpretation.

7.4 Purchasing

7.4.1 Purchasing process

- (i) Where supply of materials/products is required the materials/products shall be selected in accordance with the contract (specification) documents including compliance with other relevant Sector Schemes (See appendices A & B of the SHW).
- (ii) Where timber is used the purchasing process shall include systems to establish timber sources (that they be procured from legal and managed sustainable sources), species and preservative treatment (that Sector Scheme 4: Natural and Conferred Durability of Timber be used). This shall apply to supplier selection, evaluation and re-evaluation processes.

7.4.2 Purchasing information

No specific interpretation.

7.4.3 Verification of purchase product

No specific interpretation.

7.5 Production and service provision

7.5.1 Control of production and service provision

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

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

(b) **either**

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

or

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

The Organization's management shall have a working knowledge of the documents listed in Appendix B that are relevant to the work described in the Contract. Also see Appendix B for client contract specification.

A Lead Environmental Barriers (structural) Installer shall control no more than four Environmental Barriers (structural) Installers at any one time and shall be present on site at all times.

Without prejudice to the above clause, where a specialist sub contractor is employed e.g. piling, the Lead Environmental Barriers (structural) Installer can be replaced with an equally qualified person.

7.5.2 Validation of processes for production and service provision

No specific interpretation.

7.5.3 Identification and traceability

Where timber is used it shall be controlled and records made to allow for the timber source to be identified. This shall be used to demonstrate that sustainable sources have been used. ^(07/09) Delivery documentation shall be checked to ensure: the materials described are as required both on the order and on the delivery documentation.

7.5.4 Customer property

Customer supplied product may include the re-use of undamaged components from existing fences as customer instruction.

7.5.5 Preservation of product

No specific interpretation.

7.6 Control of inspection, measuring and test equipment

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

8 MEASUREMENT, ANALYSIS AND IMPROVEMENT

8.1 General

No specific interpretation.

8.2 Monitoring and measurement

8.2.1 Customer satisfaction

No specific interpretation.

8.2.2 Internal audit

^(07/09)Internal audits shall be carried out at sufficient frequency and by a suitable technically competent person/s to ensure a robust assessment of the compliance of the product. The quality plan shall state the frequency of internal audits.

8.2.3 Monitoring and measurement of processes

No specific interpretation.

8.2.4 Monitoring and measurement of product

Where required in the contract, the Organization shall provide an environmental barrier (structural) test report for the environmental barrier (structural) assessed against BS EN1793 and 1794 as appropriate by UKAS accredited testing and/or certification body or equivalent (or where appropriate by a notified body). The acoustic ratings for sound absorption and airborne sound insulation are given in BS EN1793 Part 1 and Part 2 and are reproduced in Annex 2. The certificate shall be accompanied by full details of the EBS system.

8.3 Control of non conforming products

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.

8.4 Analysis of data

No specific interpretation.

8.5 Improvement

No specific interpretation.

Annex 1

Sample of an Approval in Principle

Approval in Principle

Date

Contractor's Address

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1. APPROVAL IN PRINCIPLE

Name of Project

Name of Bridge or Structure *Environmental Barriers (Structural).*

Structure Ref. No. *Give carriageway/chainages for barrier.*

1. HIGHWAY DETAILS

1.1 Type of highway

1.2 Permitted traffic speed

1.3 Existing weight restriction/Environmental Restrictions

Existing weight restrictions - Not applicable.

Environmental restrictions - Contractor to complete.

2. SITE DETAILS

2.1 Obstacles crossed

3. PROPOSED STRUCTURE

3.1 Description of structure

3.2 Structural type

3.3 Foundation type

3.4 Span arrangements

3.5 Articulation arrangements

3.6 Road restraint system type

3.7 Proposed arrangements for maintenance and inspection

3.7.1 Traffic management

3.7.2 Access

3.8 Materials and finishes

3.9 Risks and hazards considered

Construction:

Maintenance:

3.10 Estimated cost of proposed structure together with other structural forms considered and the reasons for their rejection including comparative whole life costs with dates of estimates

3.11 Proposed arrangements for construction

3.11.1 Traffic management

3.11.2 Service diversions

3.11.3 Interface with existing structures

4. DESIGN CRITERIA

4.1 Live loading, Headroom

4.1.1 Loading relating to normal traffic under AW regulations and C&U regulations

4.1.2 Loading relating to General Order Traffic under STGO regulations

4.1.3 Footway or footbridge live loading

4.1.4 Loading relating to Special Order Traffic, provision for exceptional abnormal indivisible loads including location of vehicle track on deck cross-section

4.1.5 Any special loading not covered above

4.1.6 Heavy or high load route requirements and arrangements being made to preserve the route, including any provision for future heavier loads or future widening

4.1.7 Minimum headroom provided

4.1.8 Authorities consulted and any special conditions required

4.2 List of relevant documents from the TAS

4.2.1 Additional relevant Standards

4.3 Proposed departures from Standards given in 4.2 and 4.2.1

4.4 Proposed methods for dealing with aspects not covered by Standards in 4.2 and 4.

5. STRUCTURAL ANALYSIS

5.1 Methods of analysis proposed for superstructure, substructure and foundations

5.2 Description and diagram of idealised structure to be used for analysis

5.3 Assumptions intended for calculation of structural element stiffness

5.4 Proposed earth pressure coefficients (k_a , k_0 or k_p) to be used in the design of earth retaining elements

6. GEOTECHNICAL CONDITIONS

6.1 Acceptance of recommendations of Section 8 of the Geotechnical Report to be used in the design and reasons for any proposed changes

6.2 Geotechnical Report Highway Structure Summary Information (Form C)

6.3 Differential settlement to be allowed for in the design of the structure

6.4 If the Geotechnical Report is not yet available, state when the results are expected and list the sources of information used to justify the preliminary choice of foundations

7. CHECKING

7.1 Proposed Category

Category 1

7.2 If Category 3, name of proposed independent Checker

7.3 Installation proposals or temporary works for which an independent check will be required, listing parts of the structure affected with reasons for recommending an independent check

8. DRAWINGS AND DOCUMENTS

8.1 List of drawings (including numbers) and documents accompanying the submission

9. THE ABOVE IS SUBMITTED FOR ACCEPTANCE

Signed

Name

Design Team Leader

Engineering Qualifications

Fencing Contractor or their designer

Date

10. THE ABOVE IS SUBMITTED FOR ACCEPTANCE

Signed

In the capacity of

Name

Main Contractor

Date

11. THE ABOVE IS AGREED SUBJECT TO THE AMENDMENTS AND CONDITIONS SHOWN BELOW

Signed
Name
Position Held Team Leader (SSR OS TAG)
Engineering Qualifications
TAA
Date

Appendix A: Schedule of Documents Relating to Design of Highway Bridges and Structures

British Standards

Department of Transport Local Government and the Regions (DTLR)

Miscellaneous

The Manual of Contract Documents for Highway Works (MCDHW)

Volume 1: Specification for Highway Works (February 2003)

Volume 2: Notes for Guidance on the Specification for Highway Works (February 2003)

Volume 3: Highway Construction Details (February 2003)

The Design Manual for Roads and Bridges (DMRB)

Bridges and Structures, Advice Notes (BA Series)

Bridges and Structures, Standards (BD Series)

Bridges and Structures, Technical Memoranda (BE Series)

Traffic engineering and Control, Standards (TD Series)

Highways, Advice Notes (HA Series)

Highways, Standards (HD Series)

Appendix B: Drawings

List of Drawings:

Annex 2

EN 1793-1 1997

(normative)

Categorisation of single-number rating

If, in addition to specifying the value of DL_a , there is a need to categorise absorptive performance, then the categories listed in table A.1 shall be used.

Table A.1	
Categories of airborne sound insulation	
Category	DL_R dB
A0	Not determined
A1	< 4
A2	4 to 7
A3	8 to 11
A4	> 11

(informative)

Guidance note on use of the number rating DL_a

The single-number rating DL_a is most directly relevant to characterising absorptive performance in situations where the sound radiating from the traffic stream reflected from absorptive surface and travels directly to the receiver position without further reflections from surfaces or undergoing diffraction over barriers or obstacles. In more complex situation where multiple reflections occur or where sound waves are diffracted, the original spectrum of the traffic noise will be altered so that the low frequency components may be emphasised at the receiver positions. In these latter conditions it is important to consider the performance of absorptive materials as a function of frequency.

Annex 2 cont

EN 1793-2 : 1997

(normative)

Categorisation of single-number rating

If, in addition to specifying the value of DL_R , there is a need to categorise airborne sound insulation, then the categories listed in table A.1 shall be used.

Table A.1	
Categories of airborne sound insulation	
Category	DL_R dB
B0	Not determined
B1	< 15
B2	15 to 24
B3	> 24

(informative)

Guidance note on use of the number rating DL_R

The single-number rating DL_R is most directly relevant to characterising airborne sound insulation in situations where the sound incident on the barrier is received directly from the traffic stream without this sound having undergone reflections from surfaces or having been diffracted from barrier edges or obstacles. In more complex situations, where multiple reflections occur or where sound waves are diffracted, the original spectrum of the traffic noise will be altered so that the low-frequency components may be emphasised at the barrier surface. In these latter situations, it is important to consider the performance of materials as a function of frequency.

APPENDIX A

MODEL REQUIREMENTS FOR QUALITY PLANS

Where appropriate the Quality Plan shall include:

1. Definition of the product/service to be provided.
2. The structure of the Organization describing the chain of command and stating the name(s) of:
 - 2.1 the manager responsible for the contract
 - 2.2 the Organization's site management representative;
 - 2.3 the Lead Environmental Barriers (structural) Installer(s)
 - 2.4 the Designer, where appropriate
3. Identification of the procedural content of the Organization's Quality Manual relative to the product or service being provided. A copy of this shall be made available to the Customer on request. Special attention shall be given to the inspection and test plan.
4. ^(07/09)Control of personnel selection in accordance with the scheme requirements.
5. Contract Specific procedures are required in respect of each installation.
 - 5.1 Where appropriate the following information shall be obtained by the Organization:
 - a) Name and address of Client;
 - b) Address of Site;
 - c) Means of Access;
 - d) Contract Documents;
 - e) Length and location of environmental barriers (structural) and position of gates;
 - f) Details of environmental barriers (structural) to be used, including materials and timber source, species and preservative treatment information;
 - g) Information to be supplied to the Customer/Client including any third party certification;
 - h) Specified sample panels shall be produced for acceptance by the customers;
 - i) Site terrain, subsoil, underground obstructions and voids;
 - j) Location and identification of underground and overground services and structures including vehicle restraint systems;
 - k) Delivery Programme and storage areas for materials;
 - l) Agreed areas of cutting and filling;

- m) Location of buildings, trees, roads, railways, tramways, vehicle restraint systems and other factors likely to affect environmental barriers (structural) installation;
 - n) other relevant information e.g., foundation design, environmental aspects, other relevant sector scheme compliance, materials/products supplier details, including tracability to control materials as required within the contract.
- 5.2 Where certain aspects of the information described in Clause 5.1 cannot be obtained or is not provided, the fact shall be recorded in writing and a copy given to the Customer.
- 5.3 The record retention, storage and distribution will be agreed with the customer and where specified with the client and documented in the Quality Plan.
- 5.4 Where specified fencing components shall be manufactured in accordance with Series 300, 400 and 2500 of the Specification for Highway Works, Interim Requirements Road Restraint Systems and the drawings referred to in the Contract.
6. Details of how the organization shall address health and safety issues including risk assessment on a site specific basis.
7. ^(07/09)Processes for the management of the site environment including waste management (see 7.1).
8. ^(07/09)The quality plan shall include how concrete shall be produced and controlled to comply with BS 8500 Part 1.

APPENDIX B

REFERENCE DOCUMENTS

^(07/09) The Organization shall have access to and shall use the Reference Documents and British Standards relevant to the Contract or as otherwise stated

- 1a Standards
 - 1a.1 BS 1722 Part 7 wooden post and rail fences
 - 1a.2 BS EN 12839 Precast Concrete Products – Elements for Fencing
 - 1a.3 BSEN 1793 – 1 Road Traffic Noise Reducing Devices – Test Method for determining acoustic performance
 - Part 1 Intrinsic Characteristics of Sound Absorption
 - Part 2 Intrinsic Characteristics of Airborne Sound Insulation
 - Part 3 Normalized Traffic Spectrum
 - BS EN1794 Road Traffic Noise Reducing Devices – non acoustic performance
 - Part 1 Mechanical Performance and Stability Requirements
 - Part 2 General Safety and Environmental Requirements
 - 1a.4 BS 8417 Preservation of Timber - Recommendations
- 1b National Highways Sector Scheme No 2B Installation of Vehicle Safety Systems see website www.ukas.com – publications section.
- 1c National Highways Sector Scheme No 4: Natural and Conferred Durability of Timber issued by UKAS see website www.ukas.com – publications section.
- 1d National Highway Sector Scheme No 12A & 12B/12C/12D Temporary Traffic Management see website www.ukas.com – publications section.
- 1e Applicable standards and advice notes of the Design Manual for Roads and Bridges published by the Stationery Office (TSO).
 - 1e.1 HA 66 Environmental Barriers : Technical Requirements. (Volume 10, Section 5, Part 2)
 - 1e.2 HA 65 Design Guide For Environmental Barriers (Volume 10, Section 5, Part 1)
 - 1e.3 BD2 Technical Approval of Highways Structures (Vol 1 Section 1)
 - 1e.4 IAN24 Use of temporary safety barriers at road works
 - 1e.5 IAN44 Interim Requirements for Road Restraint Systems
 - 1e.6 HD46 Quality Management Systems for Highway Design (Vol 5 section 2)

- 2a The Manual of Contract Documents for Highway Works in particular:
- 2a.1 Volume 1: Specification for Highway Works:
- Series 0000 Introduction
 - Series 0100 Preliminaries
 - Series 0300 Fencing
 - Series 0400 Road Restraint Systems clause 4.11, Pedestrian Parapet and Pedestrian Guardrails
 - Series 0600 Earthworks
 - Series 1600 Piling
 - Series 1700 Structural Concrete
 - Series 1800 Structural Steelwork
 - Series 1900 Protection of Steelwork against Corrosion
 - Series 2400 Brickwork, Blockwork and Stonework
 - Series 2500 Special Structures [Clause 2504 Environmental Barriers]
 - Appendix A Quality Management Schemes
- 2a.2 Volume 2: Notes for Guidance on the Specification for Highway Works:
- Series NG300 Fencing
 - Series NG2500 Special Structures
- 2a.3 Volume 3: Highway Construction Details (Fences, Stiles & Gates)
3. Railway Infrastructure Specific Documents
- 3a Network Rail Company Standards
- 3a.1 RT/CE/C/008 Model Clauses for Specifying Civil Engineering Works
(Section 240 – Fencing and Gates)
- 3a.2 RT/CE/C/030 Lineside Security
- 3b Railway Infrastructure Standards as prepared by other railway authorities as appropriate
4. Contract Specific Documents.
5. BS EN ISO 9000 : 2005 Quality Management Systems – Fundamentals and Vocabulary
(07/09) BS EN ISO 9001 : 2008 Quality Management Systems – Requirements
BS EN ISO 9004 : 2000 Quality Management Systems – Guidelines for Performance Improvement.
6. National Building Specification Fencing Section Q40
7. WPA Guidance Note on the Handling of Treated Wood Waste

APPENDIX C^(07/09)

COMPETENCY, TRAINING AND HEALTH AND SAFETY

1. Training for the installation of Fencing

The approved qualifications are the NVQ/SVQs in Fencing Installation at Level 2, Fencing Supervisor at Level 3 and Fencing Manager at Level 4.

These qualifications are linked to the joint Fencing Industry Skills Scheme (FISS) and Construction Skills Certification Scheme (CSCS) which is a national register for fencing industry personnel. It provides a framework for skill development combined with Health and Safety training. This gives clients assurance that installers have achieved or are working towards a qualification and they have completed the appropriate training. The FISS/CSCS scheme is split into the following categories.

Green card - This card is for a Fencing Operative who works under the supervision of a qualified and registered Lead Fence Installer at all times.

Red card – This card is for a trainee who has registered for and is working towards the NVQ/SVQ in Fencing at level 2, Supervisor at 3 or Manager at level 4. Red cards expire 3 years from date of issue. Trainee Fence Installers at level 2 will be supervised by a qualified and registered Lead Fence Installer at all times.

Blue card – This card is for Fence Installers who work under a Lead Fence Installer and who have achieved the NVQ/SVQ in Fencing at level 2. The card is also for Lead Fence Installers who are appointed by their organization and who supervise Fence Installers and Fencing Operatives.

Gold card – This card is for Lead Fence Installers or Fencing Supervisors who have achieved the NVQ/SVQ in Fencing at level 3.

Platinum card – This card is for a Fencing Manager who has achieved the NVQ in Fencing Management at level 4.

For Green and Blue card holders (and Red card holders working towards Fence Installer at level 2) installers must complete the Lantra Awards health, safety and environmental awareness course (CLSA34X) or equivalent as authorised by the FISS committee and pass the basic CITB health and safety test and then repeat them every five years in order to maintain their card.

For Gold and Platinum card holders (and Red card holders working towards Fencing Supervisor at level 3 and Fencing Manager at level 4) candidates must complete the Lantra Awards health, safety and environmental awareness course (CLSA38X) or equivalent as authorised by the FISS committee and pass the basic CITB health and safety test and then repeat them every five years in order to maintain their card.

All fencing industry personnel must hold a FISS/CSCS card stating their registered category.

Table 1 - Qualification requirements for FISS/CSCS cardholders

This table details specific requirements relevant to job holders. All site personnel are required to carry their FISS/CSCS card when on site.

		FISS/CSCS Job Title						
Card Category		Fence Operative	Trainee (level 2)	Fence Installer	Lead Fence Installer	Trainee (level 3 & 4)	Fence Supervisor	Fencing Manager
	H&S Course CLSA34X (note 1)	#	#	#	#			
	H&S Course CLSA38X (note 1)					#	#	#
	CITB H&S Test (Operative) (note 2)	#	#	#	#	#	#	#
	Green (no N/SVQ required)	#						
	Red (registered for N/SVQ Level 2)		#					
	Blue (N/SVQ Level 2)			#	#			
	Red (registered for NVQ Level 3&4)					#		
	Gold (N/SVQ Level 3) (note 4)				#		#	
	Platinum (NVQ Level 4) (note 4)							#

Notes:

1. Attend and successfully complete a FISS/CSCS approved training Health, Safety and Environmental Awareness Course (CLSA34X or CLSA38X).
2. Pass the CITB Health and Safety test (Operative).
3. Application details for FISS/CSCS cards can be obtained from Lantra Awards.
4. If your job role involves managing, supervisor and installing, these occupations must be noted on your card i.e. your platinum card should also detail your gold and blue status as applicable.

For more information please contact:

Lantra Awards, Lantra House, Stoneleigh Park, Nr Coventry CV8 2LG

Tel: 024 7641 9703 Fax: 024 7641 1655

Email: sector.schemes@lantra-awards.co.uk

2 Health and Safety

Organizations are reminded of the legal requirement to provide health and safety training for fencing industry personnel in accordance with the Health and Safety at Work etc Act 1974.

The training and assessment of fencing industry personnel required by this scheme is aimed primarily at technical competence for the installation of fencing. It is intended to provide awareness to carry out work in a safe manner however it remains the responsibility of the organization to determine and implement safe systems of work.

3. Temporary Traffic Management

Motorways and Highspeed Dual Carriageways

Temporary traffic management on motorway and dual carriageways carrying unrestricted traffic shall be designed and installed by a TTM contractor registered to sector scheme 12A/12B.

Rural and Urban Roads

This section is intended to bring the management of traffic in association with fencing activities, carried out in accordance with the provisions of this Sector Scheme, in line with the guidance in Appendix M of NHSS 12D.

- a) All temporary traffic management schemes will be designed on the basis of a site-specific risk assessment except where the rural or repetitive nature of the work justifies the use of a generic risk assessment.
- b) The provisions for temporary traffic management on rural and urban roads shall be fully documented and form part of the method statement to be supplied in accordance with Appendix A - 2.3. of NHSS 12D
- c) On works not covered by the above, the traffic provisions shall be planned and documented by a temporary traffic management Technical Officer.
- d) Where TTM on rural and urban roads is undertaken by the Organization*, subject to risk assessment, the Organization shall ensure that operatives are trained and assessed to meet the

requirements of NHSS12D.

*The Temporary Traffic Management for rural and urban roads maybe contracted out to registered TTM 12D Organizations (see Appendix M of NHSS12D)

Where NHSS 12D recognises equivalent evidence of competence to the above these shall be accepted as alternatives.

Note 1 – The definitions and abbreviations used in this appendix are taken from both NHSS documents and have the same meaning. The relevant 12D definition for the Technical Officer is:

“The person named in the Organization’s Quality Plan responsible for the establishment, modification and removal of temporary traffic management on rural and urban roads and implementation of the requirements of the contract specification. “

NB This person is a temporary traffic management Technical Officer and shall be competent as defined by NHSS12D, this may or may not be a person qualified under Sector Scheme 2A.

Note 2 – relevant module is the unit of competence identified with NHSS12D for training and the corresponding assessment.

Note 3 – Organizations must be able to demonstrate that they are working towards these TTM qualifications, which will become mandatory from the 1 January 2009.

4. Qualifications

Details of the NVQ/SVQ or Diplomas in Fence Installation Level 2, Fencing Supervisor at Level 3 and Fencing Business Manager Level 4 qualifications are available from Lantra Awards.

5. Qualifications and Credit Framework

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

Lantra Awards are actively involved in the process of beginning to identify and align several SSC’s priorities with the needs of our centres and providers. Our aim is to ensure that only Qualifications fit for purpose will be developed and that we continue to work pro-actively with our industry partners to meet the needs of employers and employees in all areas of training provision.

What is the QCF?

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

Features:

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

There will be a standardised simple architecture to describe qualifications represented by size and level – from Entry level through to level 8. Qualifications will be identified as Awards (1-12 credits), Certificates (13-36 credits) and Diplomas (37+).

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

QCF Diplomas:

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

QCF Diplomas should not be confused with the new 14-19 Diplomas that have been designed to offer a vocational route in the school sector and embrace a broad range of outcomes to enable young learners to extend both their academic skills and a broad range of their vocational learning experiences. Although the 14-19 Diplomas may involve some work placement activity they are NOT competency based qualifications and have a very different purpose. The main 14-19 Diploma in the Lantra footprint is called the 14-19 Diploma in

Environmental and Land-Based Studies.

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

Corrosion protection requirements

This is contract specific. Requirements need to be agreed with customer/client.

For more information please contact:

Lantra Awards, Lantra House, Stoneleigh Park, Nr Coventry CV8 2LG

Tel: 024 7641 9703 Fax: 024 7641 1655

Email: sector.schemes@lantra-awards.co.uk

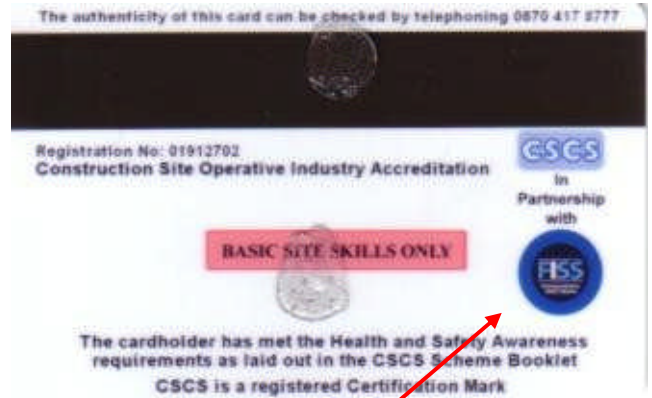
FISS/CSCS Joint Scheme

Example Cards:

Green Card: required by Fencing Operatives or Fencing Installers not holding a Blue card

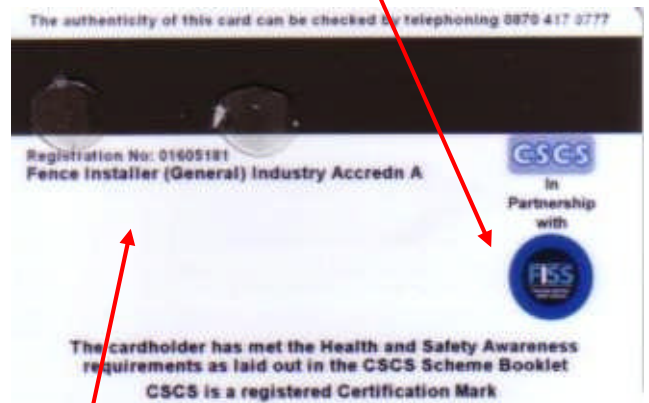


Must bear CSCS hologram logo and H&S Tested hologram logo



To conform with National Highways Sector Scheme 2C the card MUST have FISS logo

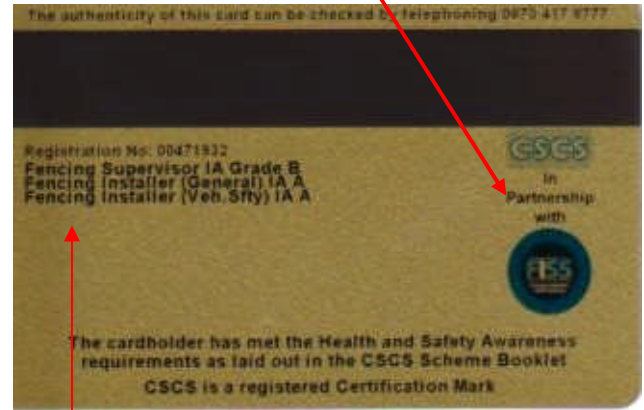
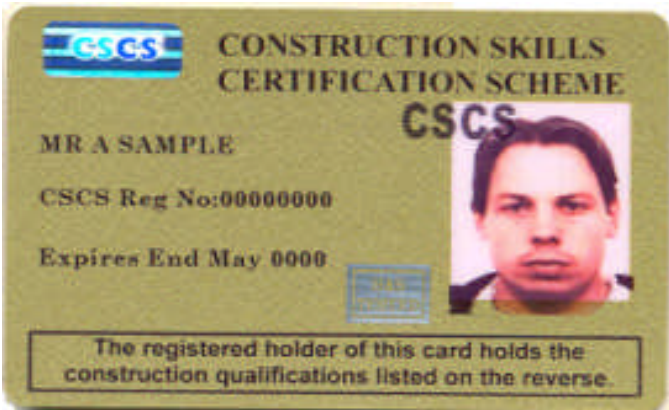
Blue Card: required by Fencing Installers and Lead Installers who also have a Lantra Awards NVQ/SVQ or Diplomas in Fencing - Level 2



This card shows operative is a skilled general fence installer.

Gold Card required by Contract Supervisor from November 2008

To conform with National Highways Sector Scheme 2C the card MUST have FISS logo

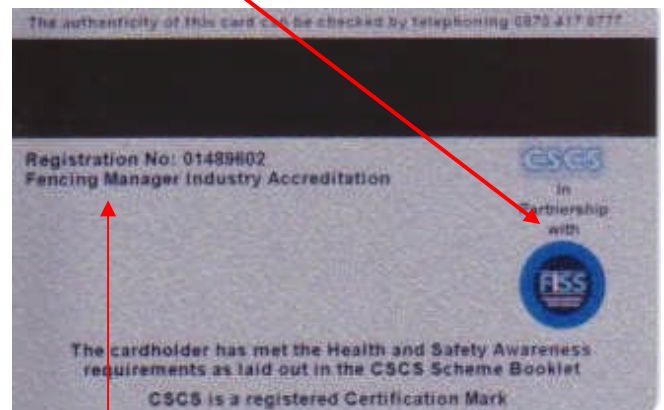


Confirms cardholder is a Fencing Supervisor and a Skilled VRS Installer* who is also a Skilled General Fence Installer.

Where the contractor is a Fencing Supervisor and a skilled VRS Installer the gold card will also denote their blue card skills (to save carrying two cards) in this example it shows that the candidate is both a skilled General Fence Installer and a skilled VRS Installer.

Platinum Card required by Manager from November 2009. (Industry accreditation available until November 2009 for those with existing Gold cards only)

To conform with National Highways Sector Scheme 2C the card MUST have FISS logo



This card holder is a Fencing Manager. The card may also have Gold and/or Blue Card qualifications recorded.

To renew a FISS/CSCS card:

Successfully complete the CITB touch screen test and the FISS Health & Safety one day course. Evidence of both these events to be submitted to Lantra Awards with the appropriate fee.

APPENDIX D

REGISTER OF DESIGNATED LEAD ENVIRONMENTAL BARRIERS (STRUCTURAL) INSTALLERS

Name of Organization:	
QA Certification Body:	QA Registration Number:

Full name of lead EBS installer	Blue N/SVQ level 2 or industry accreditation (4)	Gold N/SVQ level 3 or industry accreditation (4)	Date of designated by company	Name and signature of authorised manager
				Name Signature
				Name Signature

APPENDIX E

(07/09) GUIDANCE FOR THE CONTROL OF MONITORING AND MEASURING DEVICES: BS EN ISO 9000 : 2008 PARAGRAPH 7.6

Equipment Title	Purchase Specification	Calibration Control	Calibration Frequency
Steel Tape	EC Class II	Issue control and function check by user	In Use Check †
Fibre Tape	EC Class III	Issue control and function check by user	In Use Check †
Spirit Level			In Use Check ‡
Cable Avoidance Tools		Service in accordance with manufacturers instructions	In Use Check
Surveying Equipment		Service in accordance with manufacturers instructions	In Use Check
Foundation Stability Test Equipment		Traceable calibration	Annually and In Use Check

† check to confirm legibility/readability for required dimension.

‡ confirm level reading by reversing the spirit level (daily pre-use check)

APPENDIX F LIST OF CERTIFICATION BODIES

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:

- place the cursor onto 'about accreditation' in top grey menu bar
- move down to 'accredited bodies'
- move across to 'certification body schedules' and left click on this to take you to the list of schedules
- move down past 'key abbreviations' to 'search within the schedules' - click on 'advanced search'
- type 'Highway Sector Scheme No 2C' in the box and tick the square by 'search UKAS documents'
- left click 'search'
- this then lists the certification bodies who are accredited and their details can be found by clicking on the appropriate links.

List of Certification Bodies – Accredited as at 31 May 2009

BMTRADA	www.bmtrada.com
BSI	www.bsi-global.com
BVQI	www.bvqi.com
DNV Certification B.V.	www.dnv.com
Lloyd's Register Quality Assurance	www.lrqqa.com
National Quality Assurance Ltd	www.nqa.com
SGS UK Ltd	www.sgs.co.uk

Copies of this SSD can be obtained from UKAS www.ukas.com – see publications section.

(07/09) **APPENDIX G: THE ROLE OF THE CERTIFICATION BODIES AND ASSESSOR COMPETENCE**

(Note that this Appendix is a draft for development and is subject to review by the Certification Body Group)

1. Role of Certification Bodies

- 1.1. The independent assessment of conformity of Organizations to the requirements of ISO9001:2008 and the additional requirements required by this SSD relies upon the assessment expertise, competence and capability of accredited certification bodies.
- 1.2. The Certification Body role is to ensure, through assessment, that Organizations have management systems in place which address the enhanced ISO9001:2008 requirements detailed in this SSD.

2. Certification Body Accreditation

- 2.1. To ensure consistency and to demonstrate independent capability Certification Bodies are required to be accredited against the requirements of ISO 17021 : 2006 by the United Kingdom Accreditation Service (UKAS) or an equivalent International Accreditation Forum (IAF) member for assessment and registration of ISO9001:2008 quality management systems interpreted in accordance with this NHSS.

3. Assessor and Assessment Team Competence.

- 3.1. The Certification Body must be able to demonstrate to UKAS that it possesses and can maintain the necessary assessor experience and technical understanding in the products covered in the scope of this Sector Scheme. These assessment areas include, but not be limited to the following:
 - i) knowledge, understanding and application of this SSD
 - ii) knowledge of the manufacture, supply and installation in the Environmental Barriers (Structural) industry, including the methods and techniques sufficient to understand the processes employed and the controls necessary to ensure delivery of conforming product including installation. Typically this would include knowledge of Environmental Barriers (Structural) 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) maintaining demonstrable technical highway engineering background, capable of reading and understanding specifications and drawings, including knowledge of the Specification for Highway Works, design standards requirements for Environmental Barriers (Structural) and relevant documents eg Design Manual for Roads and Bridges (DMRB).
 - iv) Is able to demonstrate that they have ongoing suitable health and safety training which shall include appreciation of the risks involved in the manufacture, supply and installation in Environmental Barriers (Structural).
- 3.2. The Certification Body must also ensure that assessors have sufficient knowledge of health & safety requirements related to construction work.
- 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 (when available).
- 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 9001:2008 Lead Auditor qualification or Certification Body equivalent and demonstrable expertise in leading assessment teams.
 - ii) knowledge of the provision, supply and installation of Environmental Barriers (Structural) industry, including the methods and techniques sufficient to understand the processes employed and the controls necessary to ensure delivery of conforming product. Typically this would include knowledge of Environmental Barriers (Structural) 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) Is able to demonstrate that they have received suitable health and safety training which shall include appreciation of the risks involved in the provision, supply and installation of Environmental Barriers (Structural).

- iv) is able to demonstrate technical engineering background, capable of reading and understanding specifications and drawings, including knowledge of the Specification for Highway Works, design standards requirements for Environmental Barriers (Structural) and relevant documents eg Design Manual for Roads and Bridges (DMRB).
- v) knowledge, understanding and application of this SSD

4. Conduct of Assessments.

- 4.1. Certification Bodies shall ensure that during a three year certification cycle there is evidence of assessment of all installation activities covered by the Organization's scope of registration.

5. Format and Content of Registration Certificates.

- 5.1. Certificates of registration issued by Certification Bodies, which include within the scope of registration reference to compliance with this Sector Scheme, shall be in a format and contain the content detailed in Appendix K of this SSD.
- 5.2. The National Highway Sector Scheme Logo shall be included in any Certificate of Registration which has this Sector Scheme detailed in the Scope of Registration. The logo shall only be used and applied in the manner detailed in any conditions of use which may be published from time to time.

6. National Highway Sector Schemes Schedule of Suppliers.

- 6.1. Certification Bodies shall monitor the National Highway Sector Schemes Schedule of Suppliers posted at **www.scheduleofsuppliers.com** to ensure equivalence between their clients registered to this Sector Scheme and the listed Organizations and reports any discrepancies by email to scheduleofsuppliers@lantra-awards.co.uk.
- 6.2. Certification Bodies shall provide to National Highway Sector Schemes Schedule of Suppliers administrator at Lantra Awards details of registered Organizations whose scope of registration against this Sector Scheme has ceased to be applicable. This shall be completed within 10 working days of that situation occurring. The process shall be controlled and documented.

7. Responsibilities and Reporting on Sector Scheme Performance.

- 7.1. Each Certification Body accredited for this Sector Scheme shall provide to the Chairman of the SSACEBS a summary report which includes as a minimum:
- a) observations and comments on the implementation and assessment findings related to the Sector Scheme including any omissions or deficiencies in its scope.
 - b) recommendations for improving/clarifying the SSD
 - c) feedback on deficiencies against contract documentation

This may be a report co ordinated by the relevant lead certification body representative.

- 7.2. Each Certification Body shall prepare a list of Organizations whose scope of registration includes this Sector Scheme for comparison against the Schedule of Suppliers. This to issued to the Chairman once a year.
- 7.3. The report refered to in 7.1 shall be provided in the month before each National Highway Sector Scheme Liaison Committee meeting (normally April and October), so that it may be considered during the Group Sessions of the Liaison meeting. This is to issued to the Chairman of the National Highway Sector Scheme Liasion Committee and the Chairman of the SSACEBS.
- 7.4. It is mandatory that all Certification Bodies are represented at the National Highways Sector Scheme Liaison Committee.
- 7.5. 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.

(07/09) **APPENDIX G1: GUIDANCE TO ASSESSORS' AND OTHER AUDITORS' COMPETENCIES REQUIREMENTS FOR NATIONAL HIGHWAY SECTOR SCHEME 2C – the Design, Supply, Installation and Repair of Environmental Barriers (Structural) for Infrastructure Works**

Section 1 – General Information

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

Section 2 - Requirements

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

2A General background to the scheme.

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

This is normally contained in the introduction to the scheme, in this instance the scheme (NHSS 2C) was initially developed from NHSS 2A for general fencing which itself had been developed from existing certification body schedules and the participation of stakeholders including the Fencing Contractors Association.

- ii) To whom the scheme applies/field of application
See Scope (section 1) in NHSS 2C document
- iii) Contact details of those that can offer scheme specific assistance

Secretary of the Advisory Committee to the Sector Scheme see Appendix J1 to the scheme. Information should also be contained in the Organization's quality manual/NHSS documents

iv) An overview of the highway infrastructure that the scheme applies to Environmental Barriers (Structural).

v) The range of contracts that the scheme can apply to
See Scope in relevant NHSS document ie NHSS 2C (section 1)

vi) Specific types of works that the scheme applies to

See Scope (section 1) in NHSS 2C document and also Appendix L in NHSS 2C when developed; in this instance the scheme applies to environmental barriers (structural).

vii) Definitions and terminology that are particular to the scheme

See section 3 of the NHSS 2C

viii) Routes to competency of management, supervisors and operatives etc delivering the scheme services

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

ix) Overview of important reference documentation applicable to the scheme

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

Knowledge of relevant European and British Standards for environmental barriers (BS EN 1793), and in particular those requirements relating to product conformity, type testing and their requirements. Familiarity with SHW especially Series 300 and 2500, and associated notes for guidance, including when these are updated.

Relationship with other NHSS and their applicability to this scheme. Knowledge of processes and their applicability involved in the manufacture, sampling, testing and installation of the product.

Knowledge of the components of the product including timber species.

2B Summary of where the scheme introduces the interpretation of ISO 9001:2000

4. Quality Management System	Interpretation Y/N	Comment
4.1	Y	
4.2		
4.2.1	Y	
4.2.2	N	
4.2.3	N	
4.2.4	N	
5. Management Responsibility		
5.1	N	
5.2	Y	
5.3	N	
5.4	N	
5.4.1	N	
5.4.2	N	
5.5	N	
5.5.1	N	
5.5.2	N	
5.5.3	N	
5.6	-	
5.6.1	Y	
5.6.2	N	
5.6.3	N	
6. Resource Management		
6.1	N	
6.2	-	
6.2.1	Y	
6.2.2	Y	See Appendices C, and D
6.3	N	
6.4	N	
7. Planning and Product Realization		
7.1	Y	See Appendix A
7.2	-	
7.2.1	N	
7.2.2	N	
7.2.3	Y	
7.3	-	
7.3.1	Y	
7.3.2	Y	
7.3.3	N	
7.3.4	N	
7.3.5	Y	
7.3.6	Y	

7.3.7	N	
7.4	-	
7.4.1	Y	
7.4.2	N	
7.4.3	N	
7.5	-	
7.5.1	Y	
7.5.2	N	
7.5.3	Y	
7.5.4	Y	
7.5.5	N	
7.6	Y	See Appendix E
8. Measurement, Analysis and Improvement		
8.1	N	
8.2		
8.2.1	N	
8.2.2	N	
8.2.3	N	
8.2.4	Y	
8.3	Y	
8.4	N	
8.5	-	
8.5.1	N	
8.5.2	N	
8.5.3	N	

2C Overview of Environmental Barriers (Structural)

- 1 safe working practices
- 2 operative/supervisor training and qualifications
- 3 maintain equipment
- 4 public protection
- 5 environment
- 6 testing/inspection/workmanship
- 7 Health and Safety
- 8 other

2C1 – Safe Working Practices

Auditors should be sufficiently competent to make general observations on the effectiveness of the organisation's safety provisions. This may include

Correct Personal Protective Equipment Worn

Equipment approved and suitable for use.

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

- must be able to read and understand their job sheet, risk assessment etc; and have appropriate communication skills.
- Method Statements/work procedures
- Risk Assessment
- Induction card/skills card

Vehicles/loads are inspected and drivers are qualified (where appropriate)

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

Awareness of relevant H&S legislation as applicable to environment barrier installation

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

2C2 Training and Qualifications

Auditors should be aware that the people in the organisation will need to

- Have achieved appropriate training and competency modules/NVQ
- Be aware of and understand the system processes and documentation in which they are involved
- Have been inducted on specific equipment (by employer) or if appropriate (ie under training) is supervised by a qualified person
- Be aware of and understand the relevant requirements of this NHSS
- Be aware of and understand the provisions for implementation of training in NHSS 2C.
- Have been inducted on relevant site specific H&S issues (daily if necessary)

Hold relevant skills card and authorisations

2C3 Maintain Equipment

Auditors should be aware of the importance of keeping plant and equipment properly maintained

- Operative/supervisor is aware of appropriate legislation requirements

- Maintenance checklists are available and have been completed on a regular (daily, weekly etc) basis

2C4 Public Protection

Auditors should be sufficiently competent to make general observations on the effectiveness of the organization's provisions for the protection of the public. This may include

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

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

2C5 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.

2C6 Testing/Inspection/Workmanship

Auditors should be aware of the importance of inspecting the final installation and where appropriate checking of fastened connections and fixing down bolts/anchors.

2C7 Health and Safety

Auditors should be aware of the current Health and Safety legislation and related legislation, such as CDM regulations, as it applies to this sector scheme.

APPENDIX H

ORGANIZATION ACCEPTANCE AND GUIDELINES FOR NEW ENTRANTS

1) ORGANIZATION ACCEPTANCE

- 1.1 For work carried out on roads managed by the Highways Agency, the Welsh Assembly Government, Transport Scotland and DRD (Northern Ireland) or their agents, only those Organizations holding a valid Certificate of Registration for work within the scope of this SSD will be accepted as complying with Clause 104 and Appendix A of the Specification for Highway Works.
- 1.2 For work managed by other highway authorities, infrastructure providers or other authorities acceptance of the Organization will depend on the requirements of the Contract.

2) GUIDELINES FOR NEW ENTRANTS

- 2.1 The committee unanimously agreed that it was unnecessary to provide advice other than applying to any relevant UKAS accredited certification bodies who had been accredited to undertake assessments against this Sector Scheme Document.

APPENDIX J1:

FEEDBACK

Any observations or complaints relating to this document or the process described herein should be addressed to the Committee Secretary

2C SSD Environmental Barriers (Structural) Committee
Lantra Awards
Lantra House
Stoneleigh Park
Coventry
Warwickshire
CV8 2LG

Tel: 024 76 419 703

Fax: 024 76 411 655

E-mail sector.schemes@lantra-awards.co.uk

Issue Identified:

Suggested Action:

Name:

Organization:

Address:

Contact details:

Date:

Signature

APPENDIX J2:

(07/09) **APPENDIX J2: FEEDBACK TO CERTIFICATION BODIES**

Any comments concerning 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 feedback should be made to the Organization's certification body detailing the problem identified. Contact details may be obtained by following the procedure given in Appendix F.

Any other comments should be fed back to the Certification Body.

Issue Identified:

Organization's Details:

Name:

Address:

Feedback

Name:

Organization:

Address:

Date:

Signed:

^(07/09) APPENDIX K: THE INTERPRETATION OF CERTIFICATES ISSUED BY CERTIFICATION BODIES

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

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

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

- The scope of registration including specific registration to BS EN ISO 9001:2000 and this NHSS including the scheme title e.g. National Highway Sector Scheme 2C for The Design and/or Supply, Installation and Repair of Environmental Barriers (Structural) for Infrastructure Works
- The identification of each and every location (depot/area/office) to which the CoR is applicable.
- The services/product offered by the Organization at each location identified on the CoR e.g. NHSS 2C for The Design and/or Supply, Installation and Repair of Environmental Barriers (Structural) for Infrastructure Works, Environmental Barriers (Structural) is an applicable category.
- Logos for the NHSS, UKAS (or equivalent) and the CB.
- The name and address(es) of the Organization
- The validity of the certificate
- A unique reference number/code
- The signature of a relevant CB official with his name and title

Categories of Work are:

Environmental Barriers (Structural)

The following are example models for the certification.

Figure 1 shows the scope of registration on the certificate and

Figure 2 shows an example of an Appendix for scope of registration. The italic text in square brackets indicates where specific text would need to be included. Where appropriate the information on location and their respective scopes may be included on the Appendix for scope of registration.

Figure 3 shows the scope of a typical NHSS 2C certificate of registration for the The Design and/or Supply, Installation and Repair of Environmental Barriers (Structural) for Infrastructure Works

Figure 4 shows an Appendix to the certificate of registration for the The Design and/or Supply, Installation and Repair of Environmental Barriers (Structural) for Infrastructure Works

Figure 1 Example Model Certificate of Registration.

[CERTIFICATION BODY NAME / LOGOS]

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

[ORGANIZATION NAME]

[Organization Address]

[Town]

[County]

[Post Code]

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

BS EN ISO 9001:[2008] AND THE FOLLOWING NATIONAL HIGHWAY SECTOR SCHEMES

For the following scope of registration

[List of appropriate highways related works].

National Highways Sector Schemes

[Sector Scheme number and Title]

[Sector Scheme number and Title]

[Sector Scheme number and Title]

[(Appendix ... details the full scope of registration and Appendix ... details the locations covered by this registration)]

Figure 2 Example Model Appendix

[Certification Body Name / Logos]

APPENDIX

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

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

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

Scope of Registration
[List of appropriate highways related activities]

National Highway Sector Schemes

[Sector Scheme Number and Title]

[Sector Scheme Number and Title]

[Sector Scheme Number and Title]

<i>Depot, Regional Office etc</i>	<i>Applicable Sector Scheme(s)</i>	<i>Scope of Registration</i>
<i>[Depot 1 New road, Newtown]</i>	<i>NHSS Sector Scheme 2A</i>	<i>Sub Category A</i>
	<i>NHSS Sector Scheme 2C</i>	<i>Environmental Barriers (Structural)</i>
<i>[Depot 2 Old Road, Oldtown]</i>	<i>NHSS Sector Sector 2B</i>	<i>Brifen Wire Rope, Deltabloc 80</i>

Figure 3 Example Model Certificate of Registration for Sector Scheme for The Design and/or Supply, Installation and Repair of Environmental Barriers (Structural) for Infrastructure Works

[CERTIFICATION BODY NAME / LOGOS]

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

[ORGANIZATION NAME]

[Organization Address]

[Town]

[County]

[Post Code]

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

BS EN ISO 9001:[2008] AND NATIONAL HIGHWAY SECTOR SCHEME 2C

For the following scope of registration

Sector Scheme for The Design and/or Supply, Installation and Repair of Environmental Barriers (Structural) for Infrastructure Works

National Highways Sector Schemes

2C– Sector Scheme for The Design and/or Supply, Installation and Repair of Environmental Barriers (Structural) for Infrastructure Works

Certificate Number: *[Certificate Number]*

Issue Date *[date]*

Renewal Date *[date]*

Signature

[Name & Title of Certification Body Official]

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

UKAS, 21-47 HIGH STREET, FELTHAM, MIDDLESEX, TW13 4UN
TEL: 020 8917 8400 ■ FAX: 020 8917 8500 ■ WEBSITE WWW.UKAS.COM

Figure 4 Example Model Appendix to Certificate of Registration for Sector Scheme for The Design and/or Supply, Installation and Repair of Environmental Barriers (Structural) for Infrastructure Works

[Certification Body Name / Logos]

APPENDIX 1

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

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

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

Scope of Registration:

Sector Scheme for The Design and/or Supply, Installation and Repair of Environmental Barriers (Structural) for Infrastructure Works

National Highway Sector Schemes

2C Sector Scheme for The Design and/or Supply, Installation and Repair of Environmental Barriers (Structural) for Infrastructure Works

<i>Depot, Regional Office etc</i>	<i>Applicable Sector Scheme(s)</i>	<i>Scope of Registration</i>
<i>[Depot 1]</i> <i>New road, Newtown]</i>	<i>Sector Scheme 2C for the Installation of Environmental Barriers (Structural)</i>	<i>The design supply and repair of Environmental Noise Barriers (Structural) National Highway Sector Scheme 2C</i>

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

APPENDIX L: GUIDANCE TO CLIENT

It is recommended that Clients acknowledge the requirements of this Sector Scheme Document as a contract requirement.

(05/09) National Occupational Standards (NOS)

National Occupational Standards can be an incredibly useful tool to assist you in developing your workforce.

National Occupational Standards have many uses from underpinning qualifications and training to assisting you in:

Appraisals- helping devise benchmarks for measuring your staffs' skills, knowledge and performance

Recruitment – helping you write job descriptions and person specifications

Training – helping you to meet the training needs of your staff

What are National Occupational Standards (NOS)?

National Occupational Standards(NOS) provide a clear description of the skills, knowledge and understanding required by an individual to do a particular job. An example of a NOS (task) would be 'maintain plants outdoors' which would then describe what the individual must be able to do and what the individual must know and understand in order to undertake this task.

Each suite of NOS covers a specific industry and is applicable across England, Northern Ireland, Scotland and Wales. Sector Skills Council (SSC) are the custodians of the NOS they produce and are responsible, together with industry for the maintenance and updating of NOS for their sectors.

How are they developed?

Sector Skills Councils (SSC) are responsible for working with industry to ensure that NOS are in place, up-to-date and relevant. Because of the number of micro businesses and small to medium enterprises within the sector Lantra uses the relevant Industry Group, trade associations, focus groups, consultations and additional industry contacts with practical or educational experience. It is vital that businesses work with the SSC on NOS to make sure they accurately describe the skills and knowledge needed by an industry or profession. The Industry Groups are informed of the NOS revision/development and volunteers are asked to come along to meetings.

- Industry identifies the need for revisions to the NOS which is done on a three yearly cycle and in line with wider research in the industry.

- At the initial meeting the process for the review is decided which may include nominating a particular person/group to revise/develop the NOS with the support of the Lantra contact. Further development/review meetings will be arranged at this point.
- As NOS are UK wide and not specific to a nation, consultation with all interested parties will take place across the UK and is either through the Lantra website or consultation meetings.
- The final stage is for the Industry Group sign off the NOS via the Chair at the Industry Group meeting or via e-mail.
- Following Industry sign off Lantra submit the NOS to the United Kingdom Co-ordinating Group (UKCG) for approval, which has representative from the four nations.

Sector Skills Councils are provided with a guide for carrying out the process of review/developing of NOS further information about this process can be found via the following <http://www.ukces.org.uk/Default.aspx?page=4415>. This website is freely available in the public domain.

How is the process funded?

The process of review and development is funded through the UK Commission for Employment and Skills (UKCES). Sector Skills Councils prepare a project proposal which is reviewed and funding of the work agreed.

The funding obtained is used for venue hire, expenses for employers' travel, Lantra staff time for working on NOS, some industry expertise and where necessary translation of NOS into Welsh. Where an Industry Group identifies a need to provide industry expertise in writing new NOS, Sector Skills Councils are able to agree in advance to reimburse some of this time. It is expected by the Governments of the four Nations that industries contribute in kind to maintaining the NOS, this is normally done through volunteer time of the working group members.

What do National Occupational Standards mean?

NOS are the building blocks for developing job profiles, units, training and qualifications. There are 115 uses of NOS and these can be found on the Lantra website www.lantra.co.uk. Some of these include:

- Identifying the current skills of the workforce
- Identify best practice in jobs

- Developing training and recruitment plans to fill any gaps and shortages
- Writing job descriptions
- Identifying training needs and setting objectives in job appraisals.

FISS/CSCS Joint Scheme Registration Cards

This Sector Scheme requires fencing industry personnel to hold FISS/CSCS skills cards. FISS/CSCS requires holders to undertake health and safety training as well as confirming the card holders fencing competencies.

Refresher training and card renewal is required every 5 years.

This Sector Scheme does not recognise CSCS only cards (such as the Highways Maintenance with a fencing unit) as they do not demonstrate the fencing skills or health and safety training required for this Sector Scheme.

Road Death Investigations

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

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

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

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

Temporary Traffic Management

Where appropriate, it is recommended that Clients acknowledge the requirements of Sector Scheme Document 12D in conjunction with this Sector Scheme Document.

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

- 1 It is necessary for the Client to ensure that all those involved in temporary traffic management operations are appropriately trained and skilled, whether or not they are directly employed. The modular training scheme described in Sector Scheme Document 12D is designed to cater for the various alternative situations, ranging from the employment of a lone worker cutting hedges to a temporary traffic management contractor for a major highway contract.
- 2 The Client must always ensure that a detailed risk assessment for the specific site has been undertaken and incorporates an assessment of traffic conditions as described in Sector Scheme Document 12D Annex Form 1 to Appendix A. In instances where a non-registered organisation is employed it will be appropriate for the Client, or his agent for the Works design, to carry out a preliminary risk assessment.
- 3 Specific attention is drawn to Sector Scheme Document 12D Appendix M which states that it is not intended that organizations registered to NHSS Sector Scheme Document 2C where TTM is required should also be registered to NHSS12D.
- 4 Lantra Awards have established and manage a schedule of registered Organizations that have been registered to National Highways Sector Schemes free access to the schedule is obtained by logging on to the Schedule of Suppliers website www.scheduleofsuppliers.co.uk.