

# NEWSLETTER

January 2009

## National Highway Sector Schemes - An Update

### Introduction

National Highway Sectors Schemes were developed by CSS and HA with the co-operation of UK Accreditation Service [UKAS], Certification Bodies and Industry just 10 years ago. [c.f. *CSS Materials Newsletter Spring 1999*]. The principal drivers were that Clients recognised that operating Second Party QA schemes, such as that for asphalt manufacture, and trying to ensure installed quality by random inspection and testing were no longer appropriate, when highway construction and maintenance was being outsourced to long term contractors who must be responsible for the installed quality. However the Ultimate Clients still have the responsibility for highway safety and ensuring value for money which can only be demonstrated by ensuring durability for a period possibly longer than the term contract.

BS EN ISO 9001 and its predecessor BS 5750 provided the opportunity for Clients to use independent professional Certification Bodies to provide an audit function of their Contractors' Quality Management System. The underlying principal was that a good quality system would deliver a good quality product all of the time.

Inspection and Testing, by their very nature, can only prove snapshots or samples of product delivery. Testing cannot always be carried out because of site constraints such as access, because the installation process makes testing impossible or because of the destructive nature of some tests... It can lead to arguments about the validity of results. Inspection requires teams of trained and competent staff for which it can be difficult to provide continuity as workloads fluctuate; it also blurs the responsibility for quality.

The quality of the manufacture of installed products is increasingly covered by the Factory Production Control [FPC] processes within European Standards. However for some highway products this can be carried out without any independent surveillance [Attestation Level 4]. Additional requirements for the use of external audit by Certification Bodies of the system and to cover the items not included within FPC e.g. Contract Review and detailed training requirements for supervisors and operatives, can be

included within a Sector Scheme, as has happened with Asphalt Production NHSS 14.

System Certification is not a guarantee of quality. It is a mechanism to improve the chances that good quality work will be delivered. Where a Client is not prepared to accept any lowering of standards, even inadvertently, he will have to supplement the schemes with his own Inspection and Testing.

There are now 24 Sector Schemes produced or in development covering a very wide range of activities. Those implemented are listed in the table below, together with the name of the Chairman and Secretary of the Committee responsible for its operation. Suppliers must confirm their registration to an NHSS with "schedule of suppliers" and can log their Certification and scope on [www.scheduleofsuppliers.co.uk](http://www.scheduleofsuppliers.co.uk) which is searchable. Certification bodies relevant to a scheme are described in Appendix F below. It should be noted that this list may not be complete and the absence of a company from that list does not necessarily mean that they are not certificated. If in doubt ask the company for their certificate of registration and ensure that the relevant Sector Scheme is clearly referenced in their scope.

Each Sector Scheme Committee meets at least annually to manage the operation of their scheme and make any necessary changes to the documentation. This could take account of any feedback, including that from other NHSS, changes in available training and reference documents and improvements to the scheme as a result of its operation.

### Quality Management System Documentation

The Quality Management System needs to contain all the key elements to ensure the consistent manufacture and installation of a product. These should be familiar to most people, as BS EN ISO 9001 principles are now widely used by Clients and Consultants. They may be summarised as follows

- A Quality Plan to set out how the contractor will address all the problems that will need to be solved during the process of manufacture and/or installation, and may be generic to the Scheme. It will normally contain a Method Statement for a particular job

- Documents giving a detailed record of what, when, how, by whom and what with, tasks were carried out and the results of inspections and testing.
- The Client's order documentation and details of the review of these prior to accepting the order [contract review] to ensure they are practicable, appropriate resources are available for the tasks and they are possible in the timescale.
- The role of management in delivery of the Quality Management System.
- The training and competency requirements for staff and operatives
- Policies for procurement and subcontracting
- How non-conforming product is identified and the actions to be taken to correct the problem and prevent its recurrence
- Details of the internal audit process – normally every aspect of the process is covered over a 12mth period, including site works, by the contractors own auditors.
- What the organisation is doing to continually improve the quality of its service to customers

Whilst these are spelt out in general in ISO 9001, it was recognised that additional guidance was required both for companies seeking certification to National Highways Sector Schemes and for their Certification



national highway sector schemes

Bodies to ensure a consistent approach to the certification process. This is provided in the

Sector Scheme Documentation. Sector Schemes build on the systems-based approach by giving appropriate emphasis and clarity to key areas within the systems. Specific requirements such as the type and frequency of quality control testing, compliance levels and corrective and preventive actions are set out to try to ensure that the systems deliver a suitable level of quality and consistency.

The documents can also be use by Contractor's QA staff and customers to help identify particular important features of a scheme.

The Sector Scheme documents can be viewed by using the link below under "Sector Schemes for Quality Management in Highway Works":  
[http://www.ukas.com/information\\_centre/Publication/s/PubsForCBAccred.asp](http://www.ukas.com/information_centre/Publication/s/PubsForCBAccred.asp)

All the documents for all the schemes follow the same format. They contain definitions of staff and operatives, jargon definitions and details, clause by clause, of any special interpretation of ISO9001.

They do not repeat any ISO9001 clauses. There follows a series of Appendices as follows the titles of which are largely self explanatory.

**Appendix A** - *Detailed requirements for the contents of Quality Plans.*

This can contain draft checklists

**Appendix B** – *Reference documents*

This lists the key reference documents e.g.

Specifications, BS and EN Standards, trade and other bodies best practice guidance documents.

**Appendix C** - *Training Requirements and Health and Safety.*

It will normally contain details of what knowledge is required, and how and from whom the training can be obtained. An appropriate level of CSCS Card is mandatory for all schemes

**Appendix D** - *Sample record of training and competencies attained*

**Appendix E** - *Calibration.*

Requirements for all equipment that takes a measurement

**Appendix F** - *Certification Bodies.*

This gives details of how to find details on the UKAS website of the Certification Bodies that provide services to the scheme. A summary list that is updated at quarterly intervals is contained in MCHW Volume 1 Appendix A

[www.standardsforhighways.co.uk/mchw/voll/pdfs/appendix\\_a.pdf](http://www.standardsforhighways.co.uk/mchw/voll/pdfs/appendix_a.pdf)

**Appendix G** - *The role of the certification bodies and assessor competence.*

The Certification Body must be able to demonstrate to UKAS that it possesses and can maintain the necessary assessor experience and technical understanding of process covered in the scope of the relevant Sector Scheme. Assessor training modules have been prepared to assist with this. An Assessor would normally be a graduate and/or have an NVQ level 4 or equivalent experience.

Some schemes also list the principal points within the process that an auditor should check and comment upon. This can also be used for internal to guide internal audit.

**Appendix H** - *Organization acceptance and guidelines for new entrants.*

This states that only NHSS Certificated companies can carry out the function on the HA Network. For other customers it may be a contractual requirement. From its inception CSS as made it its policy that its members will implement Sector Schemes in contracts, as they come up for review.

### **Appendix J - Feedback.**

Feedback is sought on how the scheme is delivering the required customer quality. However, almost no feedback is being received by the NHSS Committees. This makes continual improvements and targeting customers' particular concerns very difficult. CSS supervisory staff are strongly urged to bring to the attention of the relevant NHSS Chair when they observe things on site that suggest that the scheme cannot have been complied with, e.g. clearly incompetent /untrained staff or with no knowledge of the specified requirements or without CSCS Cards

### **Appendix K: The interpretation of certificates issued by Certification Bodies.**

This ensures that Certificates show the scope of accreditation of the company and the locations, both offices and depots from where it is supplied.

### **Appendix L: Guidance to Clients**

This is a new section where the NHSS Committee can explain matters pertaining to Client implementation of the scheme

### **Role of Certification Body and UKAS**

CBs are organisations assessed by UKAS as competent to carry out the process. They do this using staff with the minimum competencies listed in Appendix F, who carry out independent audits of the company, normally so that the every aspect of the quality system is inspected over a 3 year period. They pay particular attention to the internal audit reports and test results as these are the main link to actual works. They inform the company of the minor and major non-conformities they find; these must be addressed promptly.

UKAS carry out a review of the paperwork produced by CBs, to ensure that it is thorough and that appropriately qualified auditors have been used. They also carry out surveillance audits with the CB.

### **System Certification**

System Certification can only be effective if it is adequately robust and is implanted within the culture of the company. The proper planning of the site works, production of contract specific documentation, the training and re-training of staff, carrying out testing as required at the frequency specified in the scheme or specification, the maintenance of Quality Assurance audit teams and payment to Certification Bodies are all overheads at a time when every aspect of a contractors operations is being scrutinised to reduce costs.

However Health and Safety legislation impinges on the need for trained and competent staff and Corporate Manslaughter legislation can lead to extensive and intrusive police activity if a road death

is contributed to by negligent activities. Absence of the documentation that a NHSS provides could become a serious matter.

Certification is contractual requirement for most contractors to the Public Sector and experienced, reputable contractors recognise the benefits in terms of reduced risk and costs of poorly planned work and remedial works a good system will provide.

A major fear still expressed by certified firms is that some Clients still prefer to buy the cheapest product even if it has no QA pedigree, or depend on a main contractor's QA to ensure quality. These solutions do not provide any assurance of quality and will not therefore enable authorities to demonstrate Best Value.

System Certification has also changed the role of Clients supervisory staff. Whilst watching what operatives do for a short time gives a snapshot of performance, it does not necessarily ensure work is done well when they are not there. A Client supervisor should also consider his role as a Second Party auditor of the quality system, checking that the key elements have been and have been addressed. Particular attention needs to be paid to the correct implementation of the Method Statement and the competency of sub-contractors' operatives (if they are not already known).

### **CSS Actions for Implementation**

1. Ensure the requirements for NHSS Certification as required by SHW Clause 104 are included in tenders and other contract documents.
2. Check Certificates for scope, location and validity using the websites.
3. For individual projects obtain a copy of the Contractor's contract review, Quality Plan, and Method statement.
4. Ensure that all supervisory staff are trained in and familiar with the relevant Sector Scheme documents and the details of the specification.
5. Obtain copies of the scheme client instructions and contract review, Method Statement relevant SHW Appendices.
6. Show interest in the system by 'random' checks on site and talking to operatives.
7. If a problem is identified with a certificated company fill in and send off a complaint/ comment form that can be found at Appendix J of that Sector Scheme's schedule. Copy in the CSS representative (if known) or the Chairman of the relevant Sector Scheme committee. (See below)

Scheme	Scheme Title	Chairman	Secretary
0	Liaison ( Management )Group	Ian Walsh Tel: 01622 605875 ian.walsh@jacobs.com	Ian Walsh Tel: 01622 605875 ian.walsh@jacobs.com
1	i) Manufacture of VRS (Safety fences)	Peter Male Tel: 01283 840429 <a href="mailto:peter@highways-training.co.uk">peter@highways-training.co.uk</a>	Lantra (Sally Green) Tel: 02476 419703 <a href="mailto:sally.green@lantra.co.uk">sally.green@lantra.co.uk</a>
	ii) <i>Manufacture of General Fencing</i>	-	-
2A	Supply and Installation of General Fencing	Wendy Baker Tel: 07000 560722 <a href="mailto:w.baker@fencingcontractors.org">w.baker@fencingcontractors.org</a>	Lantra (Sally Green) Tel: 02476 419703 <a href="mailto:sally.green@lantra.co.uk">sally.green@lantra.co.uk</a>
2B	Supply and Installation of Vehicle Safety Fencing	Peter Male Tel: 01283 840429 <a href="mailto:peter@highways-training.co.uk">peter@highways-training.co.uk</a>	Lantra (Sally Green) Tel: 02476 419703 <a href="mailto:sally.green@lantra.co.uk">sally.green@lantra.co.uk</a>
2C	Design, Supply and Installation of Environmental Barriers	Ian Frost Tel: 01435 813535 <a href="mailto:ian.frost@newtonandfrost.co.uk">ian.frost@newtonandfrost.co.uk</a>	Lantra (Sally Green) Tel: 02476 419703 <a href="mailto:sally.green@lantra.co.uk">sally.green@lantra.co.uk</a>
3	Manufacture and Supply of Industrial Fittings-		
4	Timber Preservation	Keith Grant Tel: 01392 666502 <a href="mailto:KGrant@devon.gov.uk">KGrant@devon.gov.uk</a>	Keith Grant Tel: 01392 666502 <a href="mailto:KGrant@devon.gov.uk">KGrant@devon.gov.uk</a>
5A	Manufacture of VRS (Parapets)	Peter Male Tel: 01283 840429	Lantra (Sally Green) Tel: 02476 419703
5B	Supply and Installation of Bridge parapets	<a href="mailto:peter@highways-training.co.uk">peter@highways-training.co.uk</a>	<a href="mailto:sally.green@lantra.co.uk">sally.green@lantra.co.uk</a>
11	Installation of Post Tensioning Systems	UK CARES (B Bowsher) Pembroke House, 21 Pembroke Road, Sevenoaks,Kent.TN13 1XR.	UK CARES Pembroke House, 21 Pembroke Road, Sevenoaks,Kent.TN13 1XR.
12A/B	Static traffic management on HS dual carriageways	Lance Williams (HA) Tel: 01306 878 290 <a href="mailto:lance.williams@highways.gsi.gov.uk">lance.williams@highways.gsi.gov.uk</a>	Lantra (Sally Green) Tel: 02476 419703 <a href="mailto:sally.green@lantra.co.uk">sally.green@lantra.co.uk</a>
12C	Mobile lane closures on Dual Carriageways		
12D	Static traffic management on roads other than HS dual carriageways	Nick Philp Tel 01926 412307 <a href="mailto:nickphilp@warwickshire.gov.uk">nickphilp@warwickshire.gov.uk</a>	Lantra (Sally Green) Tel: 02476 419703 <a href="mailto:sally.green@lantra.co.uk">sally.green@lantra.co.uk</a>
17	Vehicle Recovery	Lance Williams (HA) Tel: 01306 878 290 <a href="mailto:lance.williams@highways.gsi.gov.uk">lance.williams@highways.gsi.gov.uk</a>	Lance Williams (HA) Tel: 01306 878 290 <a href="mailto:lance.williams@highways.gsi.gov.uk">lance.williams@highways.gsi.gov.uk</a>
18	Environment and Landscape (including Ecology)	Tony Sangwine Tel 0117 372 8494 <a href="mailto:Tony.Sangwine@highways.gsi.gov.uk">Tony.Sangwine@highways.gsi.gov.uk</a>	BALI (Karen Down) Tel 02476 698651 <a href="mailto:Karen_down@bali.org.uk">Karen_down@bali.org.uk</a>
19	Corrosion Protection of Transportation Infrastructure Assets (Industrial Coating of Ferrous Materials)	Alex Smale Tel : 07803 798114 <a href="mailto:alex.smale@fairfieldmabey.com">alex.smale@fairfieldmabey.com</a>	Geoff Bowden Tel: 0161 930 5834 <a href="mailto:Geoffrey.Bowden@highways.gsi.gov.uk">Geoffrey.Bowden@highways.gsi.gov.uk</a>
20	Execution of Steelwork	Roger Pope Tel <a href="mailto:r-j-pope@btconnect.com">r-j-pope@btconnect.com</a>	Geoff Bowden Tel: 0161 930 5834 <a href="mailto:Geoffrey.Bowden@highways.gsi.gov.uk">Geoffrey.Bowden@highways.gsi.gov.uk</a>
6	Lighting Column, Manufacture and Verification	Clive Lane Tel: 01279 777501 <a href="mailto:clivelaneforLCTF@aol.com">clivelaneforLCTF@aol.com</a>	David Coatham (ILE) Tel: 01889 569941 <a href="mailto:dave@ile.org.uk">dave@ile.org.uk</a>
8, 9B & 10	Installation and Maintenance of Highway Electrical and/or Highway Electronic Equipment and/or Associated Highway Works	Gareth Prichard Tel: 01273 491145 <a href="mailto:Gareth@bowden-house.co.uk">Gareth@bowden-house.co.uk</a>	Gareth Pritchard) Tel: 01273 491145 <a href="mailto:gareth@streetlighting.uk.com">gareth@streetlighting.uk.com</a>
9A	Manufacture of Traffic Signs	Len Williams Tel: 01268 745353 <a href="mailto:L.Williams@routesigns.co.uk">L.Williams@routesigns.co.uk</a>	Len Williams Tel: 01268 745353 <a href="mailto:L.Williams@routesigns.co.uk">L.Williams@routesigns.co.uk</a>
22	Management, operation and maintenance of Road Tunnels	Russell Williams Tel 07917 551037 <a href="mailto:WilliamsRus@pbworld.com">WilliamsRus@pbworld.com</a>	Russell Williams Tel 07917 551037 <a href="mailto:WilliamsRus@pbworld.com">WilliamsRus@pbworld.com</a>
7	Installation of Road Marking and Road Studs	Eric Hadfield Tel: 01352 712039 <a href="mailto:ridgeway19@supanet.com">ridgeway19@supanet.com</a>	George Lee (RSMA) Tel: 0161 763 7711 <a href="mailto:rsma@dial.pipex.com">rsma@dial.pipex.com</a>
13A	Supply and Installation of Surface Dressing	John Baxter (RSDA) Tel: 01206 274052	Alistair Jack (SSCA) Tel: 01244 674613
13B	Supply and Installation of Micro-Surfacing	<a href="mailto:jbaxter@rsta-gb.org">jbaxter@rsta-gb.org</a>	<a href="mailto:secretary.scca@btclick.com">secretary.scca@btclick.com</a>
13C	Patching ( Title TBA)	new	-
14	Asphalt Production	Lance Williams (HA) Tel: 01306 878 290 <a href="mailto:lance.williams@highways.gsi.gov.uk">lance.williams@highways.gsi.gov.uk</a>	Malcolm Simms (QPA) Tel: 020 7963 8016 <a href="mailto:Malcolm.simms@qpa.org">Malcolm.simms@qpa.org</a>
15	Supply of Paving Grade Bitumen	Mike Weller Tel: 01234 796030 <a href="mailto:Mike.weller@highways.gsi.gov.uk">Mike.weller@highways.gsi.gov.uk</a>	Chris Southwell (RBA) Tel: 01423 876 361 <a href="mailto:Chris.southwell@ukrba.com">Chris.southwell@ukrba.com</a>
16	Asphalt Laying	Lance Williams (HA) Tel: 01306 878 290 <a href="mailto:lance.williams@highways.gsi.gov.uk">lance.williams@highways.gsi.gov.uk</a>	Malcolm Simms (QPA) Tel: 020 7963 8016 <a href="mailto:malcolm.simms@qpa.org">malcolm.simms@qpa.org</a>