



National Highways Sector Schemes for Quality Management in Highway Works

16
For the laying of asphalt mixes

**Published by the Sector Scheme Advisory Committee for the Quality
Management of the Laying of Asphalt Mixes**

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It is the Committee's policy that the issue of any revision to this document shall be an issue of the full document rather than individual pages. The following data gives information where changes to the technical content of the document have been made in this edition. These and minor changes to the text are highlighted by sidelining.

ISSUE STATUS

Issue No.	Date Published	Comments
1	March 2004	1 st Issue
2	February 2006	Amendments to identification of organisation representatives, update of list of accredited Certification Bodies, note on notification of Certification (App H), guidance on use of Appendix J, new Appendix K.
3	January 2007	No amendments to technical content - mainly editorial and formatting amendments. Update on list of accredited Certification Bodies.
4	August 2007	Various editorial and technical amendments and addition of new Appendix L
5	Jan 2011	New Appendix C1, G1, J3. Other editorial amendments to ensure extant references.

(February 2006) Revisions included in this document

Clause 3.3 deleted, organisation representatives to be identified by Clause 5.5 in a task-based manner.

Appendix C amended to reflect task-based identification of organisation representatives.

Appendix F amended to list/update contact details for accredited Certification Bodies (at the time of publication) and method of identifying accredited CBs.

Appendix H amended to highlight organisation responsibility for notification of certification to compilers of Schedule of Suppliers.

Appendix J1 & 2 amended to include more guidance on use of feedback forms.

New Appendix K on Interpretation of Certificates issued by Certification Bodies.

(January 2007) Revisions included in this document

Clause 1 - clarification of Scope and application of Scheme

Appendix B - added references to European Specifications for Asphalt for implementation in 2008.

Appendix C - added guidance for competency of delivery vehicle drivers

Appendix F - addition of two further accredited Certification Bodies (at the time of publication).

Appendix K - clarified text on interpretation of certificates issued by Certification Bodies.

(August 2007) Revisions included in this document

Foreword – New Note 3

Clause 6.2 – Technical change

Clause 7.4 – Explanatory Note and additional technical requirement concerning notification of Category C non-compliance added
Clause 8.2.2 – Internal audit requirements revised
Appendix C – Additional guidance on Drivers Skills Cards included
Appendix L – New Appendix giving guidance to client highway authorities

(Jan 2011) Revisions included in this document

Throughout – Normative Reference updated to BS EN ISO 9001:2008
Clause 1.1 - Delete reference to BS 594 and 4987 Parts 2
Clause 4.2.2 – Additional reference to safe working practices
Clause 6.2 – Concept of 'total gang competence' for Appendix C, updated link to Sector Scheme 12D
Clause 7.4.3 – Amend references to Q-level to OCL
Appendix B – Updated references & links – European Standards for asphalt
New Appendix C1 – Total Gang Competency guidance
Appendix F – CB search instructions updated
New Appendix G1 – Assessor & Auditor Competence guidance
Appendix H – updated link to Schedule of Suppliers
Appendix J2 – additional request for feedback
New Appendix J3 – Feedback to Client Bodies on Policing of National Highway Sector Scheme Registration
Appendix L – Additional guidance for client / visitors to site re. health & safety.

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COMPOSITION OF SECTOR SCHEME ADVISORY COMMITTEE

The Sector Scheme Advisory Committee for the Quality Management of the Laying of Asphalt Mixes has developed this scheme for the third party Quality Management of laying of asphalt mixes (except Mastic Asphalt) based on a standard core Assessment Schedule amplified by Appendices.

Organisations involved in drafting of this Scheme Document include:

Association of Public Service Excellence,
British Aggregates Association,
Civil Engineering Contractors Association,
County Surveyors Society,
Highways Agency,
Highways Term Maintenance Association
Mineral Products Association,
UKAS,
and Certification Bodies accredited against the Scheme.

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SELECTION OF CERTIFICATION BODY

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

Prospective companies seeking registration under this scheme should ensure that they engage a Certification Body specifically accredited by UKAS to assess against the requirements of this SSD. Specifiers, consultants, engineers etc. that require confirmation of compliance with the Contract Specification in respect of Quality Management should confirm the current status of the quality management system certificate issuer and that specific reference is made to this Sector Scheme.

INTRODUCTION

This Sector Scheme Document is a live document and will be amended as appropriate. Those using the document should always ensure that they have the current version. The United Kingdom Accreditation Service (UKAS) will act as custodian of the master copy of this Sector Scheme document and will make it available to any interested parties as necessary.

Any observations relating to this SSD should be addressed using the form from Appendix J1 directly to:-

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ASSESSMENT SCHEDULE FOR THE QUALITY MANAGEMENT OF THE LAYING OF ASPHALT MIXTURES FOR ROADS AND OTHER PAVED AREAS

FOREWORD

This schedule contains requirements for a quality management system for laying of asphalt mixtures. It interprets, where necessary, the requirements of BS EN ISO 9001: 2008 in specific relation to the laying of asphalt mixtures for roads and other paved areas, including those in which coated chippings are incorporated during laying but excluding Mastic Asphalt which is outside the scope of this schedule and is covered by separate QA procedures in the UK.

NOTE 1: To accord with accepted European terminology, the term 'asphalt' used in this document, unless accompanied by a descriptor such as 'hot rolled' or 'stone mastic' is used in its generic sense to refer to the range of asphalt and coated macadam mixes traditionally used in the UK.

NOTE 2: Users of this scheme document should ensure that they are working to the latest edition. UKAS can advise on the date of the current edition.

NOTE 3: This scheme document is specific to Quality Management and does not cover Environmental Management or Health and Safety Management requirements. These Management systems are separately described in ISO 14001 and ISO 18001 respectively.

1. Scope and Application

1.1 General

This schedule specifies requirements for quality management systems to be used by organisations laying asphalt mixtures, including those into which coated chippings are incorporated during laying, and interprets the requirements of BS EN ISO 9001: 2008 and should be read in conjunction with that Standard.

Such quality management systems have the aim of giving customers assurance that this process consistently conforms to the relevant technical specifications, in particular British Standard BS 594987.

1.2 Application

The schedule applies to site operations where asphalt laying by hand or machine is the main intended activity (during construction and/or maintenance) and not where it forms a supplementary or complementary activity e.g. reinstatement after installation of other services,

NOTE The scheme is not intended to specifically cater for the placement of asphalt in small areas for example patching of potholes or other surface defects to make a road safe.

The scope of this schedule excludes the requirements of Clause 7.3 of BS EN ISO 9001: 2008 – Design and Development. Such exclusion does not affect the organisation’s ability, or responsibility, to provide service or product that meets customer and applicable regulatory requirements.

Note: *This exclusion arises because asphalt mixtures are generally laid to customer requirements.*

2. Normative References

The following normative documents contain provisions that, through reference in this text, constitute provisions of this schedule, and as such should be read in conjunction with this schedule.

- BS EN ISO 9000:2005, *Quality management systems. Fundamentals and vocabulary*
- BS EN ISO 9001:2008, *Quality management systems - Requirements*
- BS EN ISO 9004:2000, *Quality management systems. Guidelines for performance improvements*

The structure of this schedule reflects the main clause numbering used in BS EN ISO 9001: 2008. Where no reference is included in this document, the requirements are as stated in BS EN ISO 9001:2008 without further qualification.

3. Terms and Definitions

For the purposes of this schedule, the terms and definitions given in BS EN ISO 9000: 2005 apply.

3.1 General

The following terms are used in BS EN ISO 9001: 2008 to describe the supply chain and are adopted in this Schedule:

supplier \longrightarrow **organization** \longrightarrow **customer**

NOTE: *The term “organisation” in the context of this document (spelt as “organization” in BS EN ISO 9001: 2008) refers to the laying contractor that is accredited against this Scheme.*

3.2 Document Specific Definitions

- 3.2.1 **Asphalt** A mixture of mineral aggregate and normally a bitumen or modified-bitumen binder, although in some cases the binder may be non-bituminous, e.g. a clear resin binder as used in coloured/pigmented asphalt. To accord with accepted European terminology, the term 'asphalt' is used in this document, unless accompanied by a descriptor such as 'hot rolled' or 'stone mastic', in its generic sense to refer to the range of asphalt and coated macadam mixes traditionally used in the UK.
- 3.2.2 **Technical Specifications** The Technical Specifications for asphalt laying are the specifications to which the organisation has contracted to work. These specifications may be British Standard specifications, customer-supplied specifications (normally based on British Standards) or, in the case of proprietary mixtures, product-specific or organisation-supplied specifications. A list of reference documents from which the Technical Specification is likely to be formed (using some or all of the documents) is given in Appendix B.
- 3.2.3 **Asphalt Pavement Layer** The result of the asphalt laying process; often known as the "asphalt mat". This definition applies to the pavement layer in either its compacted or uncompacted state, whether laid by hand or by machine. An asphalt pavement *course* can be made up from a number of layers.

4. Quality Management System

4.1 General requirements

The organisation shall operate a quality management system complying with the requirements of BS EN ISO 9001: 2008 as amplified by this schedule. Key elements suggested for inclusion are identified in Appendix A.

4.2 Documentation requirements

4.2.1 General

The organisation shall establish and maintain quality management system documentation as required by both BS EN ISO 9001: 2008 and this schedule.

4.2.2 Quality manual

The quality manual shall outline the scope of the quality management system, and shall detail reasons for any specific exclusions.

The quality manual shall indicate the quality management system's compliance with this schedule and include a means for identifying and detailing the specific processes that directly affect the quality of the laid asphalt pavement layer.

The quality manual shall by cross-reference to the management systems in place describe how the Organisation delivers safe working practices.

4.2.3 Control of documents

Documents required by the quality management system shall have controlled status.

4.2.4 Control of records

Records are a special category of document and as such shall be established and maintained to provide evidence of conformity to this Scheme. All contract specific records shall remain confidential to the parties to the contract.

Records relating to Management Review, Internal Audit, 3rd Party Assessment and Inspection and Testing of incoming materials and the finished asphalt pavement layer shall be kept for a ***minimum*** of 6 years. All other quality records shall be kept, for a minimum period of 6 months beyond the end of the maintenance and/or guarantee period, whichever is the greater.

5. Management responsibility

5.1 Management Commitment

No specific interpretation in this document. See Clause 2 of this schedule.

5.2 Customer Focus

No specific interpretation in this document. See Clause 2 of this schedule.

5.3 Quality Policy

The organisation's Quality Policy shall demonstrate commitment to this Scheme.

5.4 Planning

No specific interpretation in this document. See Clause 2 of this schedule.

5.5 Responsibility, Authority and Communication

The organisation shall identify in the quality plan those persons with specific responsibility and authority for the management and implementation of contract requirements. Responsibilities should be identified in a task-based manner, with typical areas of responsibility likely to include:

- overall managerial responsibility for implementation of the asphalt laying operations and all contractual requirements,
- technical interpretation of the requirements of the contract specification,
- establishment and control of a laying operation to meet the requirements of the contract documentation,
- safe and correct operation of all mobile plant and equipment used in the laying process,
- control of the laying operation that will meet the requirements of the contract specification with particular reference to laying to line and level and to compaction of the pavement layer,
- health, safety and environmental aspects of the laying operation,
- traffic management responsibilities;

such that the quality of the asphalt laying process is not compromised.

For smaller schemes and organisations, one individual may have responsibility for a number of these tasks, and for a number of sites, although this may not necessarily be practicable or desirable.

5.6 Management Review

5.6.1 General

At least annually, management shall review the quality management system to ensure its continuing suitability and effectiveness. This shall be an ongoing process.

6. Resource management

6.1 Provision of resources

All necessary facilities, equipment and personnel shall be available to carry out the required processes, inspections and tests in order to construct the asphalt layer(s) in the pavement.

6.2 Human resources

The training and assessment of personnel required by this Scheme is aimed primarily at technical competence for the laying of asphalt. Such training is also intended to provide awareness to carry out work in a safe manner, however it remains the responsibility of the Organisation to determine and implement safe systems of work.

Organisations shall demonstrate their commitment to development and training of personnel. Requirements for appropriate levels of competency, experience and qualification, training and staffing shall be determined and substantiated and regularly reviewed by the organisation. Suggested guidelines for the demonstration of competency requirements for organisation personnel are outlined in Appendix C. In addition, Appendix C1 contains a list of task specific considerations that should be able to be addressed by personnel in a paving crew or in the form of work instructions detailing the action required or route of delegation / reference, and should be considered as a total competence for an organisation rather than any individual.

NOTE 1: *The above requirements apply equally to staff directly employed by the organisation or to staff employed under sub-contract to the organisation.*

NOTE 2: *As Temporary Traffic Management is likely to be a consideration in asphalt laying operations, the training and competency of personnel carrying out such work needs to be considered. Guidance for organisations certificated to this Scheme, but not for any of the Sector 12 Schemes for Temporary Traffic Management, can be found in Appendix M of the Sector 12 D Scheme Document (available to download from : <http://www.ukas.com/Technical-Information/Publications-and-Tech-Articles/Publications/PubsForCBAccred.asp>)*

6.3 Infrastructure (Plant & Equipment)

Requirements for levels of plant and equipment resources for contracts shall be determined and substantiated by the organisation. Suggested guidelines for equipment requirements are outlined in Appendix D.

7. Product realisation

7.1 Planning of product realisation

The general requirements of this clause, as outlined in Clause 7 of BS EN ISO 9001: 2008 shall be translated into more detailed process and/or site specific documented requirements.

7.2 Customer-related processes

7.2.1 Determination of requirements related to the product (Contract review)

The contract review process shall include procedures to ensure that the requirements of the customer and the contract specification are fully understood. There shall be provisions to ensure that any changes in customer or contract requirements are similarly reviewed and that such changes are communicated to appropriate personnel in the organisation.

7.2.2 Review of requirements relating to the product

The organisation's representatives shall, prior to commencement of the laying operation, review and evaluate the technical aspects of the end product required and check the practicality of the proposed measures and work instructions, and also the organisation's ability to provide such product. Where appropriate this will include liaison with the customer and/or third parties, in particular the Highway or Road Authority, and the Police. When irregularities or inconsistencies with the specification, health and safety requirements or other concerns (including concern over the anticipated performance of the asphalt pavement course) are encountered, then these shall be brought to the attention of the customer for resolution.

Matters of a significant nature that arise during any contract review shall be considered in the management review and incorporated as necessary into the Quality Management System.

7.3 *Design and development*

N.B. Clause excluded from the Scope of this Schedule

This exclusion arises because asphalt mixtures are generally laid to customer-supplied requirements.

Note: *Such exclusion does not affect the organisation's ability, or responsibility, to provide a service or product that meets customer and applicable regulatory requirements, nor to carry out design and development as part of its commitment to continual improvement.*

Expert advice should be sought for the structural design of paved areas and guidance on selection of materials.

7.4 Purchasing

7.4.1 Purchasing processes

The control procedures shall verify that suppliers of incoming materials, equipment and services are capable of providing the required quality and adequate supplies in order to maintain the planned rate and quality of production of the asphalt pavement layer. Supplier performance shall be assessed and monitored by a nominated representative of the organisation, at a frequency to be determined by the organisation dependent on the period and quantity of supply.

For highway use, asphalt shall be supplied from plants registered to the Sector Scheme for Quality Management in Highway Construction No.14: Quality Assurance of the Production of Asphalt Mixes.

NOTE: *This requirement **may** not apply to certain contracts e.g. airfields unless expressly specified in the contract documentation, but nevertheless is recommended.*

7.4.2 Purchasing information

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

7.4.3 Verification of purchased product (asphalt)

As supplies of asphalt will be drawn from a Sector 14 Scheme manufacturing plant, it should not be necessary to sample at the laying site, as the results of routine quality testing on those materials being supplied to the organisation along with current relevant Operational Compliance Level(s) (OCL) of the plant may be obtained from the supplier. If these results indicate an unsatisfactory or lesser performance level than that required by the organisation, then this should be discussed with the supplier to ascertain any quality problems and remedial actions required (if not already informed by the supplier and accounted for by the organisation).

Verification of OCL need not be site-specific but may take place prior to supply from the plant concerned, in order to provide assurance of the quality of asphalt supplies. Verification can be a continuous process.

Delivery documentation shall be inspected by a competent person to verify that the delivery satisfies the contract requirements.

Incoming asphalt shall be organoleptically (mainly visually) inspected before use. Such inspections shall be recorded. Samples of the delivered asphalt may be taken, at a rate to be determined to satisfy the needs of the contract/customer/material, and retained for testing in order to verify compliance with the specification.

Where an asphalt supplier notifies the organisation of a Category C non-compliance under the requirements of the Sector 14 Quality Management Scheme, the organisation shall notify its client to ascertain the action to be taken.

7.5 Production and service provision

7.5.1 Control of production and service provision

Quality management system documentation shall be established to describe the flow of materials and the processes carried out on them, including inspection and testing if required, from delivery through to hand-over to the customer. This shall incorporate a written method statement and/or flow diagram

to demonstrate the process control measures, personnel and equipment necessary to maintain the quality of the asphalt pavement layer in conformity with the specification and the records that are to be established, and shall reflect any site specific requirements. (This will include the procedures for control of paving and compaction equipment.)

7.5.2 Validation of processes for production and service provision

Where required by the contract documentation, samples of the laid asphalt pavement layer are to be taken in accordance with relevant Standards or methods by appropriately trained and competent personnel, who should be able to show evidence that he/she has received training in the sampling of asphalt mixes (see Appendix C).

7.5.3 Identification and traceability

The asphalt when laid shall be identifiable and traceable with regard to its production data, which can be referenced from information on the delivery ticket.

7.5.4 Customer property

The quality management system documentation shall include a procedure to be applied where the customer or an identified agent or representative supplies property or material (if required in the contract specification), to ensure that the property or material is safeguarded from damage, deterioration or misuse. This is particularly important where those products are not installed by the organisation itself e.g. third party sub-contract organisations such as kerb laying, drainage contractors etc.

NOTE: This requirement also applies to asphalt material being laid by the organisation for, or on behalf of, the material supplier.

7.5.5 Preservation of product

The quality management system documentation shall contain procedures to ensure that the asphalt is handled, stored, discharged, laid and compacted with the minimum of segregation or degradation and at an appropriate temperature.

Different asphalt types or grades and all ancillary materials such as tack and bond coats and jointing materials shall be transported and stored on site, when required by the organisation, in such a manner as outlined in the appropriate material Standard/specification/ installation manual.

The quality management system documentation shall describe the characteristics of any storage system or facilities e.g. at a central depot, or in a site-based hot box and define their mode of operation. The organisation shall ensure through checks, inspections and records that such facilities are used correctly and that stored materials maintain their suitability for use. In order to detect deterioration, the condition of the product in stock shall be assessed at appropriate defined intervals.

NOTE: This schedule applies both to situations where the organisation is responsible for collection and delivery by truck to the laying site and to those where the organisation receives deliveries directly from a supplier. The quality management system documentation should make clear the point to which the organisation's responsibility for handling, storage and delivery extends.

7.6 Control of monitoring and measuring devices

The quality management system documentation shall identify those items of plant and measuring equipment that require calibration and the frequency of such calibration. Equipment shall include, but not be limited to: thermometers, anemometers, linear measurement equipment and process recording devices e.g. vibratory roller frequency gauges and paver level devices.

Calibration procedures shall be provided for each type of measuring device, indicating the permitted tolerances for the equipment to remain in service. The quality management system documentation shall state the required accuracy of all equipment calibrations and shall identify any that require traceability to national standards. Equipment shall be calibrated and maintained at least in accordance with the manufacturers' recommendations or the relevant standard or a defined procedure, to ensure accuracy is maintained.

Relevant devices shall be checked on site daily to confirm that they are working and not damaged, and maintained to ensure that they continue to be capable of monitoring the processes involved in laying asphalt to the required specifications and tolerances. Calibration checks, daily inspection records and maintenance records shall be established and maintained.
(Daily inspections do not imply or require full calibration procedures, but rational evaluation of the condition and likely accuracy of measuring equipment).

8. Measurement, analysis and improvement

8.1 General

No specific interpretation in this document.

8.2 Monitoring and measurement

8.2.1 Customer satisfaction

No specific interpretation in this document.

8.2.2 Internal audit

Internal audits shall be scheduled such that the whole of the quality management system is audited at least annually. Activities on site are to be included in the scheduled audits. Each gang shall be subject to at least a full annual audit. This shall always include assessing the actual laying of asphalt and also the relevant associated site activities. Relevant activities might include the preparation of substrate, treatment of joints and ironwork and the application of bond/tack coat etc. Audits shall be carried out by suitably trained and qualified personnel (see Appendix G and G.1).

8.2.3 Monitoring and measurement of processes

Inspection and site testing shall be carried out at least as frequently as required in the contract specification and additionally in accordance with the organisation's quality plan which shall address process control procedures to ensure adequate monitoring of all types of work.

The results of all inspections and tests carried out shall be recorded.

All sampling and testing required shall be carried out by suitably trained personnel in accordance with the relevant procedures.

8.2.4 Monitoring and measurement of product

Prior to handing the finished asphalt pavement layer over to the customer (or at appropriate stages during the laying process), inspection shall take place and any problems recorded. Appropriate action to either correct or monitor any problems shall be planned and recorded. When appropriate, the final inspection and/or corrective measures (including monitoring) may be carried out/agreed with the customer.

8.3 Control of non-conforming product

8.3.1 General

The quality management system documentation shall identify the control procedures to be taken when non-conformity in materials, preparation or laying and/or in the finished asphalt pavement layer is identified. These may include measures such as: not permitting trafficking of the asphalt pavement, permit trafficking with speed or vehicle weight restrictions, monitoring the pavement etc.

Some inconsistencies and/or irregularities may not initially be reasonably evident or within the control of the organisation and can arise during or after the laying process. The organisation may seek concessions from the customer with regard to acceptance or repair as a result of such factors.

8.3.2 Resolution of non-conforming product

Non-conformity of the asphalt pavement layer(s) shall be reviewed and procedures for taking corrective action shall be followed. Corrective actions may include -

- (i) acceptance (by concession) of the non-conforming asphalt pavement layer(after laying);
- (ii) rejection and removal of the asphalt pavement layer(during or after laying);
- (iii) reworking of the asphalt until it does meet the required specification/tolerances (during or after laying);
- (iv) any other appropriate corrective actions described in the quality management system documentation.

The organisation shall also take action to eliminate the cause of nonconformities in order to prevent recurrence.

8.4 Analysis of data

No specific interpretation in this document.

8.5 Improvement

8.5.1 Continual improvement

No specific interpretation in this document.

NOTE: Guidelines for performance improvements of quality management systems are given in BS EN ISO 9004: 2000.

8.5.2 Corrective action

Non-conformity of the quality management system shall be reviewed and procedures for taking corrective action shall be followed.

The organisation shall also take action to eliminate the cause of nonconformities in order to prevent recurrence.

8.5.3 Preventative action

No specific interpretation in this document.

APPENDIX A

SUGGESTED KEY ELEMENTS OF QUALITY MANAGEMENT SYSTEM

NOTE: Many of the “Generic” elements below (and supporting documentation for these) are likely to be drawn from the contract documents, or exist in a “skeleton” management system, into which the “Specific” elements will be drawn for each new site or contract and may require unique supporting documentation. This ‘checklist’ is not exhaustive but may assist an organisation to prepare/develop its quality system and procedures.

	Element	Generic (with examples)	Site/Project/ Product Specific
General	External auditing <ul style="list-style-type: none"> • procedures • qualifications of auditors 	√ ISO 9000:2000 See Appendix G	
	Internal Auditing <ul style="list-style-type: none"> • procedures • qualifications of auditors 	√ ISO 9000:2000 See Appendix G	
Prior to works commencing	Contract specification	BS / EN / SHW / HAUC	√
	Quality Plan	√	√
	Contract Review		√
	Work Instructions	BS / SHW / HAUC	√
	Programme of works		√
	Health & Safety <ul style="list-style-type: none"> • risk assessments • traffic management 	Sector Schemes / "Chapter 8" / NRSWA	√
	Equipment <ul style="list-style-type: none"> • Calibration & maintenance 	BS / EN / SHW / HAUC	√
	Personnel & structure <ul style="list-style-type: none"> • responsible staff • training records 	√	√
	Materials <ul style="list-style-type: none"> • supplier approval • customer approval 	BS / EN / SHW / HAPAS SS 14	√
	During installation	Detailed programme of works	
Quality Plan		√	√
Work Instructions <ul style="list-style-type: none"> • machine lay } incl. tack & • hand lay } bond coats 		BS / SHW / HAUC	
Health & Safety		Chapter 8/ Sector Schemes 12 /	√

	<ul style="list-style-type: none"> • traffic management • product safety data • risk assessments 	COSHH	
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	Element	Generic (with examples)	Site/Project/ Product Specific
During installation (continued)	Laying records <ul style="list-style-type: none"> • location, chainage, lane, etc. • layer thickness • condition of sub-strate • material type • delivery ticket nos. • material temperature • material visual inspection (incl. stockpiles) • weather • location of joints • stoppages 	√	√ Frequency in Technical Specification
	Supplier performance assessment	√	√
	Complaints <ul style="list-style-type: none"> • customer • public 	√	√
	HAPAS products <ul style="list-style-type: none"> • approved supplier • approved installer 	HAPAS	HAPAS
	Testing <ul style="list-style-type: none"> • procedures • frequencies • material compliance • end product testing • tolerances(e.g. cross-fall, profile) • equipment calibration status • equipment condition checks • non-conformance and repair procedures 	BS / SHW / HAPAS / HAUC	√
Aftercare	Opening to traffic	BS / SHW	√
	Warranties and maintenance requirements (e.g. HAPAS)		√
	Complaints procedure	√	√
	As-built manual		√

NOTE: *The Police Road Death Investigation Manual* requires highway authorities and operators to maintain, and provide for investigation, records of highway construction and maintenance activities, particularly if the road surface is suspected to be a contributory factor in an accident. Clients should give careful consideration to the records which they will need to specify within contracts for retention for this purpose.

APPENDIX B

REFERENCE DOCUMENTS

Note: *Amendments are made to these volumes on a regular basis. Users should check that they are consulting the appropriate or most recent version of the documents in relation to the contract specification.*

1. Manual of Contract Documents for Highway Works:
Volume 1 - Specification for Highway Works (The Stationery Office)
In particular the following series:

Series 000	Introduction
Series 100	Preliminaries
Series 700	Road Pavements – General
Series 900	Road Pavements – Bituminous Bound Materials
Series 1100	Kerbs, Footways and Paved Areas
Series 1200	Traffic Signs
Series 2000	Waterproofing for Concrete Structures
Appendices A-H	

Any additional or substitute clauses identified in the contract.

2. Manual of Contract Documents for Highway Works:
Volume 2 – Notes for Guidance on the Specification for Highway Works (The Stationery Office)
In particular the following series:

Series NG000	Introduction
Series NG100	Preliminaries
Series NG700	Road Pavements – General
Series NG900	Road Pavements – Bituminous Bound Materials
Series NG1100	Kerbs, Footways and Paved Areas
Series NG1200	Traffic Signs
Series NG2000	Waterproofing for Concrete Structures
Annex 1	Publications

Notes for Guidance on any additional clauses identified in the contract

3. Manual of Contract Documents for Highway Works:
Volume 3 – Highway Construction Details (The Stationery Office)

4. Design Manual for Roads and Bridges (The Stationery Office)

5. New Roads and Street Works Act 1991

6. Highway Authorities & Utilities Committee (HAUC) Specification for the Reinstatement of Openings in Highways

7. Traffic Signs Manual Chapter 8. Traffic Safety Measures and Signs for Road Works and Temporary Situations.

8. The Traffic Signs Regulations and General Directions.

9. UKAS Sector Scheme Documents
 - Scheme 7 - Application of Road Marking Materials and Road Studs to Road Surfaces
 - Scheme 12 – Temporary Traffic Management
 - Scheme 14 – Quality Assurance of the Production of Asphalt Mixes

<http://www.ukas.com/Technical-Information/Publications-and-Tech-Articles/Publications/PubsForCBAccred.asp>

10. British Board of Agrément (BBA) Certificates
 - HAPAS - Roads and Bridges Certificates (<http://www.bbacerts.co.uk>)
11. Guidance for Safer Temporary Traffic Management - (HA, CSS and HSE) (<http://www.highways.gov.uk/aboutus/701.aspx>)
12. Temporary Traffic management on High Speed Roads - Good Working Practice - (HA, CSS, HSE, ACPO, QPA, NTMCFS, ACE, TMCA, Scottish Executive, Roads Service (NI), Welsh Assembly Government, TRL) (http://www.hse.gov.uk/foi/internalops/sectors/construction/2_03_05.pdf)
13. British/European/ISO Standards
 - BS EN 13108 – Bituminous mixtures – Material specifications*
 - PD 6691 Guidance on the use of BS EN 13108 Bituminous mixtures. Material specifications.
 - BS 594987: 2007 – Asphalt for roads and other paved areas – Specification for transport, laying and compaction and type testing protocols.*
 - BS EN 12697 Parts 1 – 44. Bituminous Mixtures. Test methods for hot mix asphalt.*
 - PD 6692 Guidance on the use of BS EN 12697 Bituminous mixtures. Test methods for hot mix asphalt.
 - BS EN 12591: 2000 – Bitumen and bituminous binders – Specifications for paving grade bitumens
 - BS 598 Parts 100, 101, 102, 104, 105, 107, 108, 109, 110, 111 - Sampling and examination of bituminous mixtures for roads and other paved areas*
 - BS EN 13036 – 1. Road and airfield surface characteristics. Test methods. Measurement of pavement surface macrotexture depth using a volumetric patch technique.
14. Other product and application specifications and regulations issued by Government Departments, Statutory and Local Authorities, or any other specifications as appropriate, and agreed between the suppliers, the organisation, sub-contractors, and the customer.

NOTE:

*The European Asphalt Specifications found in the BS EN 13108 series were implemented in the UK on 1 January 2008 and superseded British Standards 594 and 4987 (Part 1). At the same time, British Standard BS 594987 superseded BS 594 and BS 4987 Parts 2 and the various test methods forming the various parts of BS EN 12697 superseded Parts of BS 598. References to superseded standards may remain extant depending on any interim contractual arrangements relating to that implementation process.

APPENDIX C COMPETENCY GUIDELINES

Note: The table below is AN EXAMPLE of how an organisation might wish to demonstrate its training policy.

Training/ Qualification Requirements	Organisational Representatives (Typical designations)*					
	Contract Manager	Technical Manager	Surfacing Foreman	Surfacing Supervisor	Operatives	Trainee Operatives ⁴
CSCS/CSR(NI) registration ^{†1}	Essential	Essential	Essential	Essential	Essential	Essential
Plant and equipment operation ² (e.g. MPQC, (formerly EPIC) Mobile Plant Operative Competence Certificate) [†]	Preferred	Preferred	Preferred	Preferred	Essential	Essential aim
Drivers Skills Card (e.g. MPQC, (formerly EPIC) Drivers Skills Card or equivalent)	N/A	N/A	N/A	N/A	Essential for drivers of vehicles collecting asphalt	N/A
N/SVQ 2 [†] Construction & Civil Engineering Services ³	Preferred	Preferred	Essential	Essential	Essential	Essential aim
N/SVQs 3-4 [†] Construction Contracting [TBC] ³	Essential [Level 4 award]	Preferred [Level 4 award]	Essential [Level 3 award]	Essential [Level 3 award]	N/A	N/A
N/SVQs 2-3 [†] Laboratory and Associated Technical Awards ³	N/A	Essential Appropriate Professional Qualification	N/A	N/A	N/A	N/A
N.B. Any individual undertaking sampling duties should hold the relevant NVQ level 2 qualification or equivalent.						

* The quality plan shall identify individuals with responsibilities for **key tasks** which may fall outside the remit of those qualifications identified under specific job titles. The job titles noted are typical but not necessarily required to be filled within any organisation. Qualifications and competency of all individuals shall be suitable to enable them to perform those tasks identified as their direct responsibility and also in order to meet the requirements of the contract.

¹ Current health and safety knowledge is essential requirement for CSCS/CSR(NI) registration.

² Part of the requirements for CSCS/CSR(NI) card via industry accreditation route.

³ Part of the requirements for CSCS/CSR(NI) card via the N/SVQ route.

⁴ Trainees will be under supervision of competent personnel at all times.

[†] Or equivalent competency assurance in an appropriate discipline.

[N.B. Organisations are reminded of their need to commit sufficient resource to enable individuals to obtain qualifications and competence].

NOTE: *For management positions, membership of an appropriate Professional Body is desirable.*

APPENDIX C1

Guidance for Certification Bodies' Auditors on asphalt paving crew competency

The following guidance relates to some of the task specific considerations that may be expected to be addressed by personnel within a paving crew working to the requirements of this Scheme Document, appropriate National Standards and industry Best Practice. These are both explicit and implicit requirements of British Standard BS 594987.

C1-A. Transport, delivery and discharge

Ability to identify and/or control the following:-

- The material delivered is as required and that the delivery documentation confirms all of the appropriate details such as binder grade and PSV.
- That the asphalt has arrived at the correct delivery temperature for the material
- The presence of any contamination (especially on split loads).
- Asphalt that has segregated.
- That there are no obvious problems with the material. e.g., cold lumps, uncoated or partially coated aggregate, oversize, excessively fine or coarse, binder drainage, coking etc.
- The importance of delivery drivers not dropping tailings or otherwise contaminating the prepared substrate, e.g., by providing a designated tipping area;
- Any necessary material sampling if required.

C1-B. Preparatory works at the laying site

C1-B1. Assessment of the existing material or surface which is to be overlaid.

Competence & authority to ensure or seek client agreement or ability to assess the surface on which asphalt is laid to identify or ensure it is:-

- Free from loose materials and foreign matter, e.g. mud, slurry, leaves or other deleterious material.
- Not frozen
- Free of any standing water at the lowest point of the interface with the receiving layer.
- Sufficiently stable to support the laying equipment and transport;
- Joints in existing pavements that are to receive an inlay are correctly formed to ensure that they are vertical and of sufficient depth to suit the asphalt to be laid.

N.B. Issues relating to assessment and approval of substrate will often need to be confirmed in conjunction with the client or client's representative on site before approval to proceed can be obtained.

C1-B2. Tack coats and bond coats.

Ability to:-

- Ensure that the tack coat or bond coat is/has been applied at the specified rate.
- Ensure that the tack coat or bond coat is/has been applied at a uniform rate.
- Ensure that any application by hand held sprayer is carried out so as to deliver the required rate as uniformly as possible over the whole surface to be treated and that any accumulation or ponding in depressions is dealt with adequately;
- Recognise when tack coat or bond coat in an emulsion form has reached a suitable state for overlaying with the asphalt.
- That where a paver equipped with an integral spray bar, this is working correctly to satisfy the requirements above.

C1-B3. Edge Sealants.

Ability to ensure the correct application of edge sealants on vertical faces that will be in contact with the new asphalt layer.

C1-C. Laying

C1-C1. Self-propelled paver.

- Trained and experienced in the correct use (including operator-based maintenance regimes) of the specific paver in use. This is to include details such as measures required to enable the paver to lay the asphalt continuously and to produce an even and compact surface to the required widths, thicknesses, profiles, cambers and crossfalls without causing segregation, dragging, overheating, surface defects or irregularities.
- The paver hopper where ever possible is kept full.
- An awareness that material remaining in the paver hopper for extended periods may become unsuitable for use, and an understanding of what actions should be taken in such cases.
- To recognise any mechanical faults which develop as paving proceeds and to check layer thickness as paving progresses.
- Able to inspect the finished surface as it is laid and ensure that any defects are immediately rectified before any rolling takes place but without unnecessary scattering back of the asphalt by hand on machine-laid work.
- Able to identify potential problems with the asphalt including contamination e.g. from previously loaded material in the delivery vehicle if different from that currently being laid or solvents such as those from paver cleaning operations.

C1-C2. Hand laying.

- Awareness that hand laying shall only be undertaken where the site is such that machine laying is impractical and/or where small quantities of asphalt are involved.
- Be trained in the correct techniques for hand placing of asphalt so as to achieve uniform thickness & regularity without undue cooling or segregation of the asphalt.
- Be trained in the correct operation and use of hot boxes, including avoiding the prolonged storage of asphalt and the the use of an appropriate temperature setting of the hot box where used.

C1-C3. General Laying Techniques.

Ability to assess the suitability of environmental conditions for the laying of asphalt, e.g. intensity of rainfall, wind speed, air temperature, condition of surface etc. This is to include awareness of how layer thickness, binder grade etc all interact with the laying processes and how the organisation of the paving train, delivery vehicles etc need to be managed.

C1-C4. Surface course joints

Ability to ensure that all longitudinal and transverse joints in surface courses are formed vertically, are correctly sealed and finished flush with the adjacent running surface.

C1-C5. Joints in other courses

Ability to ensure that all joints in other courses (e.g. base and binder course) are formed in such a way as to ensure their compaction and bonding fully meet the appropriate specification e.g., in respect of offset, sealing of vertical face and sealing of top surface.

C1-D. Chipping of hot rolled asphalt

Ability to ensure that:-

- The chippings are applied at the correct stage in the laying process.
- The chippings are of the correct quality for the job in hand, e.g. cleanliness, condition of coating, frost free, free flowing, lump free etc.
- The appropriate rate of application of the coated chippings is as required and is maintained across the width and along the length of the section laid.

C1-E. Compaction

Competence on the specific compaction equipment such that the operation is carried out to achieve the optimum performance for the material/layer e.g. by an understanding of the frequency and amplitude of vibration and the speed of travel of vibratory rollers that is required for the particular layer thickness and mixture composition.

Responsibility for the control of the compaction stage of the paving operation to ensure that:-

- Rolling is undertaken in such a way as to achieve the correct surface profile and finish and the required degree and uniformity of compaction.
- The discharge and laying of the asphalt is not started until the roller drivers have their rollers in the correct locations, with filled water and fuel tanks and immediately ready to commence compaction;
- The asphalt is compacted as soon as rolling can be undertaken without causing undue displacement, surface cracking or loss of texture of the asphalt.
- Compaction is such that there are no distinct roller marks left on the surface.
- Compaction is substantially completed while the temperature of the mixed material is greater than any specified minimum temperature for that material.
- Temperature measurement of the asphalt is carried out in accordance with BS EN 12697-13 (where it is safe and practicable to do so).
- Rollers are not allowed to stand on compacted asphalt that is still warm enough to result in indentation.
- The positions at which the roller changes direction of travel are staggered.
- Rollers have fully functioning wetting devices fitted of at least the width of the rolls.
- That vibrating rollers are operated without vibration on certain materials, under specific conditions and in specific locations, e.g. on some bridge decks.
- That where pneumatic tyred rollers are used, competence in their correct operation and use. e.g. Correct tyre pressures etc.

APPENDIX D

PLANT AND EQUIPMENT RECOMMENDATIONS

- Plant and equipment should be allocated to contracts so as to allow for provision of reserve equipment in the case of breakdown, where necessary.

Organisation-owned Equipment

- Maintenance schedules, including 'Planned Preventative Maintenance', and provision for updating equipment to include new mechanical and control innovations, should be in place.
- Maintenance records should be kept and made available for inspection when necessary.

Hired-in Equipment

For many contracts it may be both logistically and financially more viable to employ hired equipment rather than organisation-owned equipment. In such circumstances, the organisation should assure itself of the satisfactory suitability, operation, calibration and maintenance of the equipment.

Ideally, suppliers of equipment should be certificated to BS EN ISO 9000 series.

APPENDIX E

NOT USED

APPENDIX F

CERTIFICATION BODIES ACCREDITED AGAINST THIS SCHEME

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:

- (i) Go to webpage <http://www.ukas.com/websearch.asp>
- (ii) Select search feature – “Certification Bodies”
- (iii) Type “National Highway Sector Scheme No 16” (including inverted commas) in the keyword box *
- (iv) Left click 'search'
- (v) when search results are displayed, click at head of list:

Sort certification bodies by: [Title](#)
- (vii) This then lists the certification bodies which are accredited and their details can be found by clicking on the appropriate links.

NOTE: UKAS should be contacted to confirm the accreditation status of any particular Certification Body.

APPENDIX G

ROLE OF THE CERTIFICATION BODY

1. The Certification Body shall be accredited by UKAS to issue certificates for quality management systems in accordance with BS EN ISO 9000 family of Standards, and this Sector Scheme Document.
2. The Certification Body (CB) shall ensure that organisations being assessed satisfy the requirements of BS EN ISO 9001: 2008 and Part 1 of this Schedule.
3. The CB shall visit each organisation at least annually and carry out ***process and system*** audits. Assessment visits shall include a site visit to observe asphalt laying work in progress. Every aspect of the quality management system shall be assessed over a 3-year period.

The annual audit shall pay particular attention to the management review, internal audits, corrective and preventive actions and the speed of such actions and be a representative sample of the number of laying gangs in the organisation. Significant non-compliances will require re-audit to confirm satisfactory discharge.

4. The Certification Body shall make reference to this Sector Scheme Document in any Certificate of Registration issued to an asphalt-laying organisation against the Scheme.
5. The Certification Body Group shall provide feedback on the effectiveness of the Scheme to the Sector Scheme Advisory Committee, identifying where deficiencies may exist, providing recommendations on how to improve the Scheme.
6. Support and originate data for a database of organisations currently registered against the Scheme, with some facility for public access and notification of organisations that are successful in application, or that have been removed from the register.
7. Maintain the expertise to meet the accreditation requirements of the Scheme.

It is anticipated that the personnel carrying out the audit possess a demonstrable expertise of the highway construction and surfacing industry, with broad knowledge of: relevant specifications, the material types and characteristics, surfacing methods and techniques in order to understand the controls necessary to ensure delivery of a conforming product (see Auditor Skill Requirements, below).

AUDITOR SKILL REQUIREMENTS

Auditors visiting sites shall possess a CSCS card, which includes passing the Manager's Health & Safety touch screen test.

Qualifications

- | | |
|---|-----------|
| 1. Degree, HND or HNC in civil, construction engineering discipline or other appropriate qualification (i.e. Technological or Science based qualification). | Preferred |
| 2. Member of the IAT, CIHT, IHE, ICE or other similar organisation. (May be met by experience). | Preferred |
| 3. Registered lead auditors. | Essential |
| 4. Item 1 and 2 may be replaced if a Lead Auditor has been part of an assessment team, lead by another meeting criteria 1 and 2 above, on at least 3 other occasions. | |

Experience/Skills

Thorough understanding and knowledge of current asphalt laying and site testing processes. Essential

Good understanding of other aspects of asphalt technology: Preferable

This ***may*** include:

- Production and transportation of asphalt
- binder properties/effects of storage
- plant maintenance/operation
- obtaining samples and testing

APPENDIX G1

Guidance for Assessor and Internal Auditor Competence

A CB assessor or internal auditor should be aware of the following when completing an audit:

A General background to the scheme.

- i) The reasons for development of the National Highway Sector Schemes (NHSS) and this scheme in particular, and for CB 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 16) was initially developed with QPA following the development of NHSS 14.

- ii) Field of application:

See Scope (section 1) in relevant NHSS document and also Appendix L in NHSS 16; in this instance applies to machine laying, hand laying, but not to infill around lighting columns etc.

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

Chairman of the Advisory Committee to the Sector Scheme, see Introduction to this Scheme document.

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

Roads and other paved areas

- v) Definitions and terminology that are particular to the scheme:

See section 3 of the NHSS

- vi) 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 asphalt in particular those relating to product conformity, type testing and laying i.e. BS EN 13108, PD 6691, BS 594987 and SHW 900 Series.

Knowledge of processes and their applicability involved in quality asphalt laying, foundation/tack coats/base course etc.

- vii) Routes to competency of personnel delivering the scheme services:

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

B Summary of where the scheme provides interpretation of ISO 9001:2008

For general comments, refer to NHSS 0 – Part 3 (Appendix G1).

4. Quality Management System	Interpretation Y/N	Comment
4.1	Y	
4.2		
4.2.1	Y	
4.2.2	Y	
4.2.3	Y	
4.2.4	Y	
5. Management Responsibility		
5.1		
5.2		
5.3	Y	
5.4		
5.4.1		
5.4.2		
5.5	Y	
5.5.1	-	
5.5.2	-	
5.5.3	-	
5.6		
5.6.1	Y	
5.6.2	N	
5.6.3	N	
6. Resource Management		
6.1	Y	
6.2	Y	
6.2.1	-	
6.2.2	-	See Appendices C, and D
6.3	Y	
6.4	N	
7. Planning and Product Realization		
7.1	Y	See Appendix A
7.2		
7.2.1	Y	
7.2.2	Y	
7.2.3	-	
7.3	N	
7.4		
7.4.1	Y	
7.4.2	Y	
7.4.3	Y	
7.5		
7.5.1	Y	
7.5.2	Y	
7.5.3	Y	
7.5.4	Y	
7.5.5	Y	

7.6	Y	See Appendix D
8. Measurement, Analysis and Improvement		
8.1	Y	
8.2		
8.2.1	N	
8.2.2	Y	
8.2.3	Y	
8.2.4	Y	
8.3	Y	
8.4	N	
8.5		
8.5.1	N	
8.5.2	Y	
8.5.3	N	

C Overview of asphalt laying assessment

i) Safe Working Practices

Auditors should be sufficiently competent to make general observations on the effectiveness of the organisation's safety provisions and should be aware of the current Health and Safety Legislation and related legislation, such as CDM regulations, as it applies to this sector scheme.

ii) Training and Qualifications

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

- Be aware of and understand the system processes and documentation for processes in which they are involved.
- Hold relevant skills card and authorisations
- Be inducted on specific equipment (by employer) or if appropriate (ie under training) is supervised by a qualified person
- Be inducted on relevant site specific issues
- Be aware of the importance of testing and inspection of the product.

iii) Public Protection

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

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

iv) 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.

v) Maintain Plant and Equipment

Auditors should be aware of the importance of keeping plant and equipment properly maintained, see Appendix D.

APPENDIX H

ORGANISATION ACCEPTANCE AND GUIDELINES FOR NEW APPLICANTS

ORGANISATION ACCEPTANCE

For work carried out on roads managed by the Highways Agency or its' designated agent, the Highways Agency stated that from 1 July 2005 only those organisations holding a valid Certificate of Registration for work within the scope of this Sector Scheme Document will be accepted.

For work carried out on roads managed by other highway authorities acceptance of the contracting organisation will depend on the requirements of the Contract.

It will be the responsibility of the Certificated organisation to inform the compilers of the Schedule of Suppliers (currently LANTRA Awards) that it has received certification against the Scheme within 14 calendar days of confirmation of certification - this shall be a requirement for newly certificated organisations and those renewing certification. Organisations shall additionally inform the Secretary of the Advisory Committee to the Scheme of when they receive first certification and/or have certification renewed.

Certification Bodies shall notify the Secretary of the Advisory Committee to the Scheme and the compiler of the Schedule of Suppliers when an organisation is de-certificated. This will enable an accurate and extant database of certificated organisations to be maintained for public information and reference (<http://www.scheduleofsuppliers.com>).

GUIDELINES FOR NEW ENTRANTS

Compliance with the scheme can only be fully assessed by approved Certification Bodies through an evaluation when work is in progress. Applicants should therefore consider any seasonality they may experience in the scope of their works before beginning the certification process.

To enable new entrants to the scheme to prove compliance, both documentary evidence and site procedures must be the subject of assessment. The following guidelines are provided:

- i) Organisations must have sufficient appropriately experienced and qualified key personnel, supervisors and staff, typically meeting or exceeding the competency guidelines in Appendix C of the Schedule.
- ii) Organisations must have applied for registration with a Certification Body accredited by UKAS to audit against this Scheme (see Appendix F).
- iii) Documented procedures must be in place (to the satisfaction of the Certification Body) to demonstrate that the organisation can comply with the requirements of the Scheme. A temporary certificate, based on those procedures, may be granted and will be valid for a maximum period of 12 months.
- iv) Site audits must be carried out to provide full compliance with the Scheme. Wherever possible, these audits should be carried out concurrently with the system audit, and at least within 6 months.
- v) Full certification will then be granted verifying that the Scheme criteria have been met.

APPENDIX J1

FEEDBACK RELATING TO THIS DOCUMENT

Use of Form Appendix J1:

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

Committee Chairman
Sector Scheme Advisory Committee for the Quality Management of the Laying of Asphalt Mixes
c/o UKAS
21 – 43 High Street
Feltham
Middlesex
TW13 4UN
Tel: 0208 917 8400
Fax: 0208 917 8500

Problem Identified:

Suggested Action:

Name:

Organisation:

Address:

Contact details:

DATE:

APPENDIX J2

FEEDBACK RELATING TO CERTIFICATION ISSUES

Use of Form Appendix J2:

- (i) Feedback or complaints relating to certification matters in respect of alleged deficiencies in the service provided under this scheme should in the first instance be taken up with the Organisation. In the event that the matter cannot be satisfactorily resolved, written complaints should be made to the Organisation's Certification Body, detailing the problem identified, using the form below.
- (ii) Feedback or complaints relating to alleged deficiencies in the service provided by Certification Bodies to applicant/certificated organisations should in the first instance be taken up with the Certification Body. In the event that the matter cannot be satisfactorily resolved, written complaints should be made to UKAS, copied to the Chairman of the Sector Scheme Advisory Committee (address in Appendix J1), using the form below.
- (iii) The Advisory Committee encourages users of this document – organisations, customers and auditors - to also provide feedback, using this form J2, in circumstances where deficiencies and/or concerns **are satisfactorily** discharged or resolved.

Contact addresses may be obtained by following the procedure given in Appendix F.

Problem / Feedback Identified:

Organisation's Details:

Name:

Address:

Complainant / Commentator

Name:

Organisation:

Address:

Date:

Signed:

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

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

- a) Contract identified

- b)
 - i) Details of omission in contract or

 - ii) Organisation Identified as being awarded the contract or

 - iii) both i) and ii) above

- c) Organisation raising feedback / issue
Name:
Organisation:
Contact details (Address, email address, telephone etc:)

- d) Date: Signed:

Highways Agency Roads/Contracts – Route for Feedback

Feedback should be sent by email to Standards_Feedback&Enquiries@highways.gsi.gov.uk

Other Highway Authorities

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

Health and Safety Executive

Feedback should be sent back to the relevant HSE manager or head of division responsible for this type of work within HSE. Such information or relevant contact details may be available on the HSE web-site.

APPENDIX K

THE INTERPRETATION OF CERTIFICATES ISSUED BY CERTIFICATION BODIES

Certification Bodies (CBs) 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 addenda 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 Highways Sector Scheme (NHSS) CoR is only issued by a Certification Body 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:

- a) The scope of registration including specific registration to BS EN ISO 9001:2008 and this NHSS including the Sector Scheme title - National Highway Sector Scheme 16 for the Laying of Asphalt Mixes.
- b) The identification of each and every location to which the CoR is applicable.
- c) The services/product offered by the Organization at each location identified on the CoR for NHSS 16 for the Laying of Asphalt Mixes and any applicable categories with associated typical sub-categories where applicable.
- d) Logos for the NHSS, UKAS (or equivalent) and the Certification Body.
- e) The name and address(es) of the Organization
- f) The validity of the certificate (ISO 9001 – 3 years)
- g) A unique reference number/code
- h) The signature of a relevant Certification Body official with his name and title

Categories of operations are:

- Machine laying
- Hand laying

The following are example models for certificates.

Figure 1 shows the scope of registration for a generic certificate.

Figure 2 shows an example of a generic Appendix.

Figure 3 shows the scope of a typical Certificate of Registration for asphalt laying applications.

Figure 4 shows an Appendix to the Certificate of Registration for asphalt laying applications.

Note: [The italic text in square brackets shown on the examples indicates where specific text would need to be included.]

Figure 1 Example Model Certificate of Registration.

[Certification Body Name / Logo]

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

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

[Certification Body Name] issues this certificate to the above named 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)]

Certificate Number: *[Certificate Number]*
Issue Date *[date]*
Renewal Date *[date]*

Signature

[Name & Title of Certification Body Official]

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

Figure 2 Example Model Appendix

[Certification Body Name / Logo]

APPENDIX

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

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

[ORGANIZATION NAME]

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

Scope of Registration

[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>[Sector Scheme Number and title]</i>	<i>[Detailed scope]</i>
<i>[Depot 2 Old Road, Oldtown]</i>	<i>[Sector Scheme Number and title]</i>	<i>[Detailed scope]</i>

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

Figure 3: Example Model Certificate of Registration for Asphalt Laying

[Certification Body Name / Logo]

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

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

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

BS EN ISO 9001:2000
AND
NATIONAL HIGHWAY SECTOR SCHEME 16

For the following scope of registration

Asphalt Laying

National Highways Sector Schemes

16 - National Highway Sector Scheme for Asphalt Laying

Certificate Number: *[Certificate Number]*
Issue Date *[date]*
Renewal Date *[date]*

Signature

[Name & Title of Certification Body's Official]

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

Figure 4: Example Model Appendix to Certificate of Registration for Asphalt Laying

[Certification Body Name / Logo]

APPENDIX 01

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

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

[ORGANIZATION NAME]

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

Scope of Registration:

Asphalt Laying

National Highway Sector Schemes

16 - National Highway Sector Scheme for Asphalt Laying

<i>Depot, Regional Office etc</i>	<i>Applicable National Highway Sector Scheme(s)</i>	<i>Scope of Registration</i>
<i>Depot1 New Road, Newton</i>	<i>NHSS 16 for Asphalt Laying</i>	<i>Machine laying, hand laying</i>
<i>Depot 2 Old Street, Oldham</i>	<i>NHSS 16 for Asphalt Laying</i>	<i>Hand laying</i>

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

APPENDIX L – GUIDANCE TO CLIENTS

Field of Application

a) General

Sector Scheme 16 is intended to cover the quality system necessary to give confidence that asphalt laying organisations will produce a consistently conforming laid asphalt. It covers laying both by machine and by hand in carriageways, footways and other paved areas.

The scheme was not intended to specifically cater for the placement of asphalt in small areas for example patching of potholes or other surface defects to make a road safe, or in connection with the installation of street furniture or as an ancillary part of another activity or where an individual or very small teams are employed.

b) Reinstatement of Trenches

i) Utilities work

The reinstatement of utilities trenches is subject to legislation and specification requirements developed by HAUC which do not currently include a requirement for a utility company or its servants to be registered to NHSS 16 or have a QMS to ISO 9001 in place.

ii) Works for Road Purposes

Surfacing as part of the reinstatement of trenches/excavations made in connection with works for road purposes can be the subject of this document provided the requirement is included in the contract documentation.

NOTE

Particular care is required in respect of reinstatement of trenches. Surfacing is the last operation in a series of separate activities and it is recommended that Clients should specify/use an ISO 9001 registered company that can demonstrate a satisfactory history of trench work. Such work should include both opening and reinstatement work and appropriately qualified and competent workforce should be specified in association with a site specific quality plan and method statements.

c) Road Death Investigations

The attention of client highway authorities is drawn to the Police Road Death Investigation Manual and in particular section 3.9 and Appendix F of the Manual – 2004 edition. The Manual provides information on the duties of highway authorities in respect of allegations of highway involvement and gives typical key questions that are likely to be asked of a highway authority during an investigation.

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 tests carried out.
- e) The quality of systems for traffic management
- f) Skidding resistance testing

Appendix F of the Manual provides examples of documentation likely to be required from a highway authority when there is a collision where the road surface is suspected to be a contributory factor.

If an Authority intends to require the contractor to provide the information referred to in (d) and/or (e) above, this should be stated in contract documents

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.

HEALTH & SAFETY

Clients and site visitors are reminded of their obligations to observe all health and safety arrangements and procedures in place on site.