

BM TRADA Personnel Certification System

Scheme Technical Document

STD 004/007/030– Issue 16

Q-Mark Visual Strength Grading Schemes

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1. Scope

This certification scheme will be operated in accordance with BM TRADA ‘Personnel Certification System Document’ reference OP02. Please refer to OP02 for all procedures not covered within this particular Scheme Technical Document.

Included within this STD is Visual Strength Grading of Timber for structural purposes in accordance with BS 4978, BS 5756 and, and Visual Strength Grading of Scaffold Boards to BS 2482.

A Company will hold the certification for this scheme. The Certified Grader is attributed to a particular Company.

2. Definitions & Abbreviations

The following definitions and abbreviations used throughout the document in addition to those shown in OP02. Other definitions are as given in the relevant standards.

Candidate Grader	The Nominated Individual employed by a company registered within BM TRADA schemes for Visual Strength Grading but not yet certified for carrying out grading activities covered by this scheme.
Certified Grader	The Certified Person employed by a company certified by BM TRADA for Visual Strength Grading to carry out activities covered by this scheme.
Company Registration Number	A unique number issued to the Company to be certified upon registration for the scheme.
Grader Registration Number	A unique 4 digit number issued to the Grader to be certified upon registration for the scheme.

3. Essential Requirements

3.1 Company

The Company registered in the Visual Strength Grading scheme will have a suitable documented system in place for the control of the named Graders and the material to be graded. BM TRADA may require evidence of the Company’s control system.

The Company will employ suitably Certified Graders.

The Company shall, at a minimum, satisfy the grading requirements of the relevant standard and the Scheme requirements.

The Company will be issued with a unique registration number on registration under the scheme.

3.2 Grader

A Candidate Grader will be eligible for registration if they have completed a suitable strength grading training programme and passed the associated examination. This must have been completed within the last three years prior to certification.

They must also satisfy one of the following:

- a) Evidence of the appropriate training within the previous 12 months.
- b) They have already been registered and examined within the scheme and not have been absent from it for longer than 12 months, or,
- c) They are examined prior to registration to assess if they are still competent to strength grade.

Only graders that are certified within the scheme will be eligible to mark product.

Audits to assess the continued competence of each certified grader will be conducted during the certification cycle. The frequency of these visits may be increased if problems are found with graded material, or if the volume of the material graded is so large that an increased frequency is appropriate.

Candidate Graders are issued with a unique Grader Number when certified which is included on the Grader's Q-Mark certificate card. In order to grade timber, each Certified Grader will require a Grader Stamp bearing the company registration number, their Grader Number and the information required by the appropriate grading standard.

3.3 Initial Training Requirements

Candidate Graders must have evidence that they have completed a suitable training course and passed the examination for the appropriate standard prior to certification.

Any training courses and/ or examinations completed by a candidate grader must be approved as being suitable for the scheme in question by BM TRADA. Any training courses for Visual Strength Grading will either be an accredited course or have been approved by BM TRADA (see Annex 2 of this document).

The Visual Strength Grading courses operated by the BM TRADA Timber Technology Investigations Section are approved courses.

3.3.1 Translators

Where a translator has been used as part of the training and/or examination, this shall be identified within the training documentation and shall not compromise the integrity of the training or examination process.

3.3.2 Invigilators

An Invigilator will be present during an examination process to ensure:

- Invigilate alongside an experienced invigilator on at least one occasion before doing it alone
- Have knowledge of equipment and items required by delegates
- Understand the format of the exam and the setting up of the tables
- Be familiar with the exam layout and timings
- Be able to confidently access spare equipment i.e. pens, rulers, grain scribes, grain scribe pins, knot-plot paper
- Be strict with instructions and ensure there is no conferring between delegates. Note some questions unrelated to answer may be answered by the invigilator such as areas on a piece of timber to ignore
- Collect papers at the end of exam and safely transport and store at BM TRADA's office
- Pack away the course stock correctly, safely and securely

The Invigilator will be identified for each examination process.

3.3.3 Trainer

The competency requirement for a Trainer is:

- Be a qualified and experienced grader
- Be experienced in technical speaking/presenting of other training courses
- Possess an understanding of strength-reducing defects
- Minimum of three years working in the timber industry as a consultant
- Shadowed the delivery of the course by a proven competent trainer
- Deliver the course in front of another competent trainer
- Produce a professional CV

3.3.4 Examiner

The competency requirement for an Examiner is:

- In preparation/training, mark a minimum of three courses which should also be marked by a competent examiner
- Understand the course format
- Understand what a knot-plot is and the correct way to mark the answers

- Understand whether a knot-plot should have the ‘pith in’ or ‘pith out’
- Understand the pass mark criteria

Due to the nature of the current examination process being written and based upon template answers, detailed knowledge of the appropriate grading standard is not necessary for an examiner.

4. Factory Production Control

4.1 Technical Requirements

The requirements of the Company and the Certified Person shall be in accordance with the latest revision of the appropriate standard.

- BS 4978 – Visual Strength Grading of Softwood
- BS 5756 – Visual Grading of Hardwood
- BS 2482 – Specification for Timber Scaffold Boards

4.2 Management Responsibilities

The Company shall appoint a named person to be responsible for operating the scheme. The named person will review the grading records and act as BM TRADA’s contact. Any proposed changes to the Certified Graders used by the Company are to be agreed by BM TRADA before coming into effect.

4.3 Nonconforming product

The Company’s FPC system shall maintain control of any nonconforming product to prevent its use.

5. Conformity Audits

5.1 Initial Audit

Only required if more than one year has lapsed since the appropriate VSG exam was passed. This will usually be carried out at the premises where the grader operates and is to confirm the Grader’s knowledge of how to grade timber in accordance with the grading rules of the appropriate standard shown on their training certificate.

5.2 Ongoing Audits

A risk based approach will be taken to determine the audit frequency, which will be at least one per certification cycle and within 12 months prior to the recertification date. The audit will usually be carried out at the premises where the grader operates and is to confirm the Grader’s knowledge of how to grade timber in accordance with the grading rules of the appropriate standard shown on their certificate.

5.3 Pre-audit Planning

For an audit to be conducted, the Grader must prepare for the audit and have the following available on the day:

- Access to a minimum 40 pieces of timber of each type relating to the particular certification scheme.
- Stamps or other method to demonstrate effective marking of timber.
- Procedure for marking graded timber.

6. Identification of Product

The appropriate Q-Mark identification must be applied to each product graded that falls within the scope of the Company’s certification. This is to maintain traceability and recognition that the product is certified.

All other marking requirements will be in accordance with the appropriate standard.

7. Registered Grader Card

Following initial certification the Grader can be issued with a Registered Grader Card by BM TRADA. A replacement card can then be issued to the Grader following each subsequent successful audit, either by the auditor or by BM TRADA.

8. Use of Certification Marks

Refer to OP02, clause 10.

9. Scheme development and maintenance



Any development or maintenance of this STD shall be undertaken with consideration to interested parties and stakeholders, such as:

- Timber Trade Federation
- BM TRADA approved VSG training course operators

10. Normative Reference

- EN 1912 – Structural Timber – Strength classes – Assignment of visual grades and species
- EN 1995-1-1 – Eurocode 5: Design of timber structures. General-Common rules and rules for buildings
- BS 2482 – Specification for Timber Scaffold Boards
- BS 4978 – Visual Strength Grading of Softwood
- BS 5756 – Visual Grading of Hardwood
- EN 13556 – Round and sawn timber – Nomenclature of timbers used in Europe
- EN 14081 – Timber Structures – Strength graded structural timber with rectangular cross section
- EN ISO/IEC 17024 - Conformity assessment - General requirements for bodies operating certification of persons

11. Document Approval

Document creator/ modifier	Document verifier
Name: A. Sumner Date: 14th May 2024 Signature: 	Name: L. Bersanetti Date: 14th May 2024 Signature: 

12. Revision History

Revision	Date Approved	Nature of Revision
9	October 2018	Issue status and history added as section 12 Requirement to maintain Attendance Record for training courses removed from Annex 1. Sections 5.1 and 5.2 updated to confirm where audit will be conducted. Section 7 added to explain the issuing of a Grader Registration Card.
10	December 2018	Rebranded from Exova to Element
11	November 2021	Terminology changed to align with OP02 References to tropical hardwood under EN 16737 removed as no longer applicable to VSH hardwood. INSTA 142 and EAD (chestnut) references removed. EN 1912, EN 1995-1-1, EN 13556 added to normative references. Process flowchart added to Annex 1
12	May 2022	Grader requirements updated in section 3.2 Training organisation competencies added to section 3.3.2 & 3.3.3
13	November 2022	Removed references to EN 16737 for tropical hardwood
14	May 2023	Training requirements updated in section 3.3 Ref. to BM TRADA procedure added to Annex 2.
15	June 2023	Section 3.3.4 updated to clarify examiner requirements
16	May 2024	Section 5.3 added to confirm pre-audit planning requirements for graders EN ISO/IEC 17024 added to section 10 Required supporting documents updated & process flow updated in Annex 1

ANNEX 1

Supporting Documents

Documentation for the Company

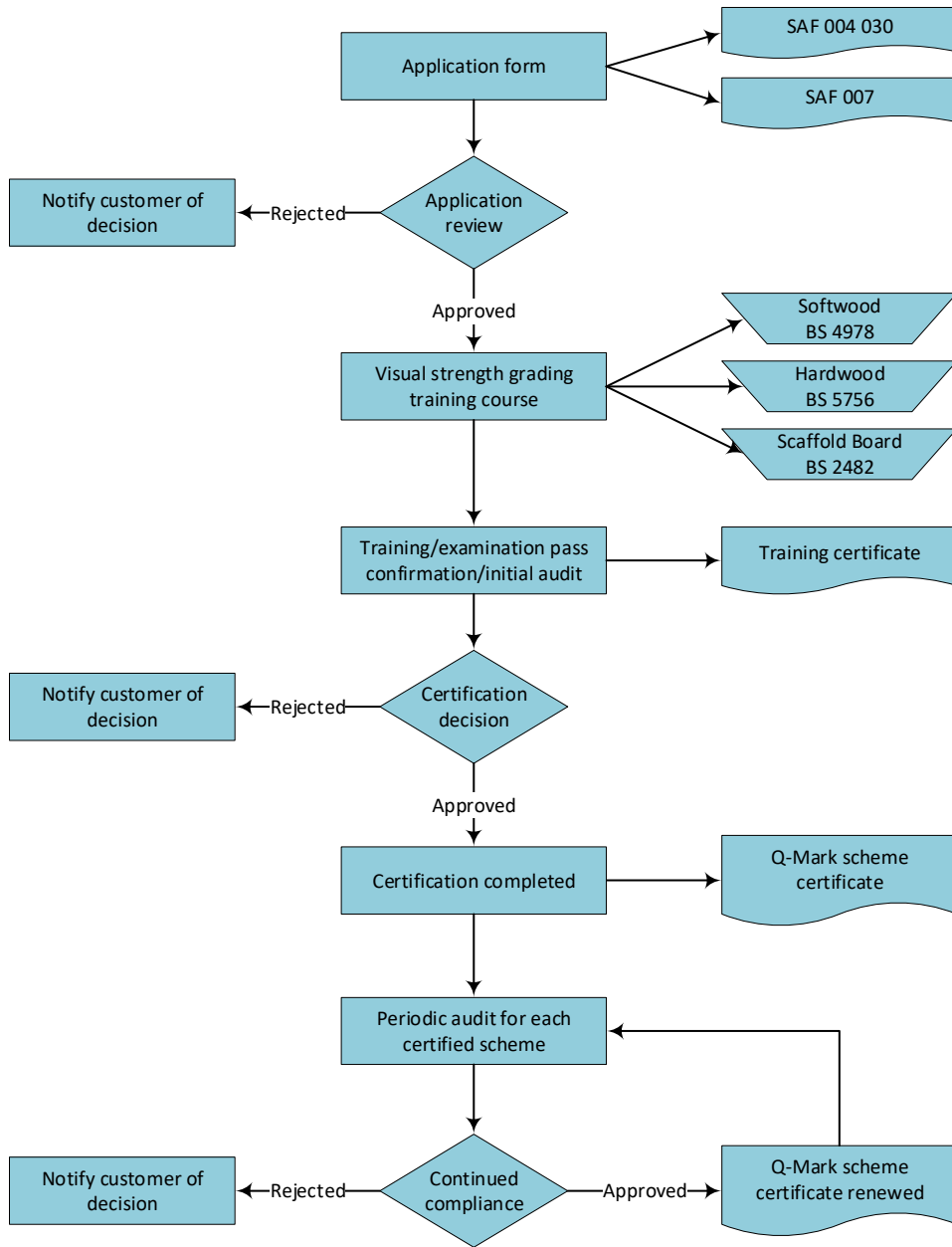
- BM TRADA Q-Mark certificate with scope of certification shall be available to appropriate Company employees.
- Record of inspection sheets.
- Certified Grader registration card.
- Procedure for marking graded timber.
- Documentation in accordance with the appropriate standard to which the Company is certified.

Documentation for BM TRADA

The following documents shall be created and/ or maintained to facilitate the effective operation of this certification scheme:

- Application form including application review
- Audit checklist
- Examination papers (held by the training provider and sample periodically reviewed by BM TRADA)
- Auditor approval records
- Certification decision and request checklist
- Certificate
- Registered Grader Card (optional)
- Scheme Technical Document

Certification Process Flowchart



ANNEX 2

Non-accredited Training Facility Requirements

When a non-accredited training facility for visual strength grading is considered for approval by BM TRADA for the purpose of certification, the training facility shall be initially audited and approved by BM TRADA Certification prior to acceptance under this STD. Each approved training provider will subsequently be periodically audited within a three year maximum frequency period in order to maintain approval. Compliance must also be in accordance with BM TRADA's controlled documented procedures.

Each training provider shall demonstrate compliance with the following requirements:

1. Contract review procedure: To determine if the customer's requirements can be provided.
2. Conflict of interest: To ensure that impartiality is not compromised between training staff and candidates.
3. Operating Procedures: To ensure that suitable documented procedures are available to appropriate staff members.
4. Training and competency: Records of staff competency to be available for all critical functions involved with the training process.
5. Calibration of measuring devices: Procedure to be maintained to control all measuring and test equipment used as part of the training process.
6. Training procedures: Procedures to include evidence of training premises, exam sites, equipment and resources.
7. Sub-contracted services: To be documented and controlled.
8. Reports/examinations:
 - a. Must clearly identify candidates.
 - b. Reports/exams to be formally completed and approved by a competent person.
 - c. Exams to remain secure and have procedure to deal with a security breach.
 - d. Candidates to sign non-disclosure agreement.
 - e. Periodic review of completed exams for correctness and consistency.
9. Training personnel: Trainer, invigilator and examiner to be identified for each candidate undertaking the training or examination process.
10. Shall be actively involved in the working group of appropriate timber standards.
11. Shall be actively running VSG training courses.
12. Personnel who run the training course shall have passed a VSG examination.
13. Shall undertake commercial timber grading services