

Scheme for Certification of Design (Building Structures)



Procedures for Auditing the Activities of
Approved Bodies and Approved Certifiers

October 2016

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Amendment Record

Current Version	Approved for issue	Comments
February 2008	General release	Incorporates further minor amendments
November 2011	General release	Incorporates further amendments and additions
October 2016	General release	Major review and revision

1.0 Aims and Objectives of the Audit Programme

The audit programme has been established by Structural Engineers Registration Ltd. (SER) in order to audit the manner in which Approved Bodies and Approved Certifiers who have been accepted as members of the Scheme undertake their duties and discharge their responsibilities. Audits will be conducted for the following purposes:

- a) To ensure that members of the Scheme uphold the standards of the scheme and adhere to its requirements
- b) To ensure that standards of performance are consistent amongst members of the Scheme
- c) To ensure that the requirements of the Building Standards (Scotland) Regulations are understood by members of the Scheme and are being applied in the certification of projects
- d) To identify areas where there are inconsistencies in interpretation in order to recognise the need for training or guidance
- e) To identify procedures which members of the Scheme find difficult to apply
- f) To establish public confidence in the robustness of the Certification Scheme as a means of protecting public safety
- g) To fulfil an undertaking to Scottish Ministers to provide an audited scheme

Audits are aimed at assessing the performance, arrangements and procedures of members of the scheme (Approved Bodies and Approved Certifiers) and are not intended for the purpose of checking structural designs or specification for individual building projects.

While the audit will not go out of its way to seek design errors, if it is clear that the requirements of Standards 1.1 or 1.2 are not being met then action will be taken as described in 6.5.

2.0 Audit Initiation

SER may initiate an audit of an Approved Body or a Certifier at any time. The timing will depend on a number of factors, such as:

- Number and severity of findings from the previous audit
- Number of certificates signed since the previous audit, or since joining the scheme
- Risk classifications of projects certified since the previous audit

An audit may also be initiated following a decision by the SER Board to investigate, for example, the discovery of, or complaints of, poor practice.

3.0 Roles and Responsibilities

3.1 **The SER Board** is responsible for overseeing the general conduct of the audit process. The Board will:

- Select and appoint individuals to the Scottish Registration Board (SRB) and the pool of auditors;
- Make arrangements for the training of auditors;
- Agree audit programmes;

- From time to time, arrange for a Director of SER to attend an audit to observe whether or not the audit is being carried out in accordance with these procedures;
- Consider the recommendations of the SRB following their consideration of findings of an audit and decide on any action, including suspension or withdrawal of membership of the Scheme, that may be necessary arising out of the audit;
- Consider reports from the Chairman of the SRB regarding general issues or trends identified by the audit process that require to be addressed by technical guidance to members, or alterations to the Scheme.

3.2 **The Head of Certification** is responsible for the overall management of the audit programme and notifying scheme members of the outcome of their audits.

3.3 **The SER Administration Team** are responsible to the Board of SER for the administration of the audit process. They will:

- Prepare audit programmes for consideration by the SER Board;
- Select Approved Bodies and Approved Certifiers for audit in line with the principles set down by the SER Board;
- Assign auditors from the SRB and the pool of auditors to conduct individual audits;
- Issue notifications to Approved Bodies and Approved Certifiers advising them of the projects and Certifiers that have been selected for audit;
- Advise the Approved Body if a Director of SER is to attend the audit;
- Monitor the audit implementation and initiate action against Approved Bodies (or Approved Certifiers) that have failed to arrange audits within the prescribed timescale;
- Provide advice and information to Approved Bodies and Approved Certifiers concerning the audit process;
- Provide audit teams with information held by SER necessary to conduct the audit;
- Collate auditors' reports and recommendations for consideration by the SRB;
- Collate corrective action responses from audited Bodies and Certifiers and present these for consideration by the SRB;
- Record the recommendations of the SRB and present these for consideration by the Board of SER;
- Advise Approved Bodies and Approved Certifiers of findings by SER arising from the audit;
- Administer the appeals process;
- Administer the mentoring process;
- Maintain the IT systems necessary to administer the scheme.

3.4 **The Scottish Registration Board (SRB)** is responsible to the Board of SER for the technical conduct of the audits. The SRB will:

- Supply audit teams from a pool of auditors appointed by the Board of SER;
- Review, discuss and agree or amend audit reports, to maximise consistency of the audit process, and make recommendations regarding any corrective action arising from the audits;

- Make recommendations regarding general issues or trends identified by the audit process that require to be addressed by technical guidance to members or alterations to the Scheme.
- 3.5 **The Audit Pool** comprises a number of appropriately qualified chartered civil or structural engineers appointed by SER to assist with the undertaking of audits.
- 3.6 **Approved Bodies** are responsible for the administrative arrangements necessary for conducting the audit. This includes the presentation of suitable records and project information as requested in the audit notification, in a suitable format to permit the audit to take place, and notifying each of their Certifiers who is involved in the audit. They are also responsible for all of their internal costs and for the costs associated with the attendance of their Certifiers; however there are generally no audit fees or costs payable to SER (except as described in Section 5.10).

Approved Bodies are required to:

- Ensure the availability of their Certification Coordinator(s) and all Approved Certifiers who they employ and who are to be audited;
 - Provide a work area within their premises suitable for the audit team to carry out the audit;
 - Ensure that all information including project records, warrant plans and files necessary to carry out the audit is readily available to the audit team. Records of building warrant plans and summaries of ground investigation and existing building condition assessment reports are required to be made available in hard copy;
 - Ensure the Health & Safety of the audit team while they are working within the premises of the Approved Body;
 - Ensure that all auditee responses are completed within ten working days of the audit report being uploaded by the auditors
 - Identify and implement Corrective Actions arising from non-conformances identified by the audit.
- 3.7 **Approved Certifiers** must make themselves available to the audit team at a time and place agreed between SER and the Approved Body that employs them (or employed them at the time when the project being audited was certified). It is recognised that this may not always be possible where, for example, a Certifier may have changed employer. SER will endeavour, where it is reasonable to do so, to arrange audits covering projects certified during a current employment. Where this is not possible SER will encourage Approved Bodies who are members of the Scheme to accommodate these arrangements by allowing their Certifiers the necessary time to attend the offices of a previous employer. If the Certifier cannot make themselves available then the audit will take place in their absence and the reasons recorded in the audit report. In these circumstances Certifiers may nominate an individual to witness the audit on their behalf. Certifiers must however realise that not being available to assist auditors may place them at a disadvantage and adversely affect the findings and outcome of the audit. Certifiers are also required to complete their auditee responses, including their proposed corrective actions where appropriate, within ten working days of the audit report being uploaded by the auditors.

Certifiers should be aware that if they produce certificates for more than one Approved Body then they are likely to be audited at each of the bodies where they have produced certificates.

- 3.8 **Certification Coordinators** provide the principal point of contact between SER and the Approved Body. They will be contacted regarding the administrative arrangements for the audit. The Certification Coordinator, or a named substitute, must be available to attend the audit on behalf of the Approved Body.
- 3.9 **Auditors** are responsible for gathering information in relation to conformance using a standard set of pre-determined criteria. Audits are generally carried out by two auditors. Auditors are nominated by SER Administration, but have the opportunity to decline to carry out the audit for reasons of conflict of interest, unavailability, etc.

Auditors are required to exercise a degree of judgement as to the classification of any particular finding using the guidance set out in this document. They are not responsible for checking structural designs and should not seek to find errors in the design, although in reviewing design documents for compliance with the scheme requirements errors may become apparent and should be dealt with in accordance with the procedures in this document.

The **Lead Auditor** will be a member of the SRB and will be nominated by SER Administration. The lead auditor is responsible for managing the conduct of the audit and will:

- Select the projects for audit;
- Confirm administrative arrangements with the Certification Coordinator of the Approved Body in advance of the audit;
- Input the date of the audit on the SER IT system;
- Chair the opening meeting, except under exceptional circumstances;
- Collate data gathered by members of the audit team;
- Prepare audit reports and explain the need for auditees to submit meaningful auditee responses within ten working days of the audit report being uploaded by the auditors;
- Chair the closing meeting except under exceptional circumstances;
- Upload audit data on the SER IT system;
- Make recommendations to the SRB.

The **Second Auditor** may be another member of the SRB or they may be a member of the Audit Pool.

4.0 Audit Methodology

- 4.1 The audit procedures described in this document are based on the recommendations contained within BS EN ISO 19011: 2011 Guidelines for quality management systems auditing.
- 4.2 **Performance Criteria:** These are lists of requirements against which the performance of the Approved Body and the Approved Certifier will be assessed and which, if met, should give confidence that the requirements of the Scheme and legislation are being met. Appendices A and B list these criteria and give some background information

explaining the importance of the item and a description of the evidence which should be presented by the auditee at audit to demonstrate that the performance criteria have been met. Where the auditors consider that the evidence presented is insufficient to demonstrate that any one of the performance criteria has been met a finding shall be recorded.

- 4.3 Audit findings have been classified into Major Non-conformances, Improvement Issues and Comments.

Major Non-conformances (MNC)	<p>These are serious failures to meet any particular performance criteria. Examples of findings that would be considered to be Major Non-conformances are listed in Appendices A and B.</p> <p>A Major Non-conformance carries a score of 3</p>
Improvement Issues (II)	<p>These are less serious failures to fully meet any particular performance criteria. Examples of findings that would be considered to be Improvement Issues are listed in Appendices A and B.</p> <p>An Improvement Issue carries a score of 1</p>
Comment	<p>A Comment will be recorded where the auditor has taken the view that the performance criteria have not been fully met however the failure is not sufficiently serious to attract one of the above classifications.</p> <p>These are intended to assist the auditee improve some aspect of their procedures but do not constitute a significant departure from acceptable practice.</p> <p>Comments do not attract scores.</p>

Audit findings will be determined by the assessment of evidence presented by the Approved Body or Approved Certifier to demonstrate compliance with the published performance criteria. Audit teams are required to undertake the audits in a systematic and consistent manner using a standard reporting methodology. A failure to meet the required standard will result in one of the above non-conformances being recorded.

- 4.4 Where a Major Non-conformance or Improvement Issue is noted the Approved Body or Approved Certifier is required to alter or improve their procedures in any future certification work. The number and type of any non-conformances identified by the audit process will influence any action taken by the Board arising from the audit, including the timescale to the next audit.
- 4.5 Audit Checklists require auditors to record information in a standard format against each of the audit sub-classifications in the audit criteria list. Auditors should use these checklists to record:
- Whether the item was audited and/or, in the case of projects, whether the item applied;

- Whether the item fully complied with the requirements of the audit criteria;
- Whether any non-conformances were identified and whether these were Major Non-conformances, Improvement Issues or Comments;
- Details of any non-conformance.

In the case of an audit of an Approved Certifier the above information should be recorded separately for each project audited:

- 4.6 The audit score will be based on the sum of the scores calculated from the number of non-conformances.

In the case of an audit of an Approved Certifier the sum of the scores will be calculated separately for each project audited and the mean of the scores and the maximum score will be determined.

- 4.7 Approved Body Audit outcome

The outcome of an Approved Body Audit will be determined following a review by the SRB and SER Board of the following:

- The initial audit score
- The severity of the audit findings (i.e. proportion of MNC's and II's)
- A review of the proposals for corrective actions
- Previous audit history
- Whether or not any corrective actions from a previous audit have been satisfactorily implemented

The outcome of the Approved Body Audit will be one of the following:

- No corrective actions required, next audit to coincide with next Certifier audit
- Approved Body to implement corrective action(s), next audit to coincide with next Certifier audit
- Approved Body to implement corrective action(s), likely period to next audit to be specified in outcome notification
- The Approved Body will be warned of suspension pending mentoring by a member of the SRB and a review of proposals for improving performance. If the proposals are acceptable the threat of suspension will be lifted. If the proposals are unacceptable the Approved Body will be suspended until acceptable proposals are submitted and a formal interview of the Certification Coordinator has been undertaken to assess their and the Approved Body's understanding of the Scheme requirements. Failure to demonstrate an adequate understanding of the Scheme requirements may result in continued suspension.
- The Approved Body will be suspended until it has submitted acceptable proposals for improving performance, following mentoring by a member of the SRB, and a formal interview of the Certification Coordinator has been undertaken to assess their and the Approved Body's understanding of the Scheme requirements. Failure to demonstrate an adequate understanding of the Scheme requirements may result in continued suspension.
- The Approved Body's membership of the Scheme will be withdrawn

4.8 Approved Certifier Audit outcome

The outcome of an Approved Certifier Audit will be determined following a review by the SRB and SER Board of the following:

- The individual scores for each project, together with the mean and the maximum scores
- The proportion of auditable items that resulted in audit findings
- The severity of the audit findings (i.e. proportion of MNC's and II's)
- A review of the auditee's proposals for future corrective actions
- Previous audit history
- Whether or not any corrective actions from an earlier audit have been satisfactorily implemented
- The types of projects audited
- An assessment of CPD undertaken over the last three years

The outcome of the Approved Certifier Audit will be one of the following:

- No corrective actions required; the likely period to the next audit is to be specified in the audit outcome notification.
- The Approved Certifier is to implement any corrective action(s); the likely period to the next audit is to be specified in the audit outcome notification.
- The Approved Certifier will be warned of suspension pending mentoring by a member of the SRB and a review of proposals for improving performance. If the proposals are acceptable the threat of suspension will be lifted. If the proposals are unacceptable the Approved Certifier will be suspended until acceptable proposals are submitted and a formal interview has been undertaken to assess their understanding of the Scheme requirements. Failure to demonstrate an adequate understanding of the Scheme requirements may result in continued suspension.
- The Approved Certifier will be suspended until he/she has submitted acceptable proposals for improving performance, following mentoring by a member of the SRB, and has attended a formal interview to assess their understanding of the Scheme requirements. Failure to demonstrate an adequate understanding of the Scheme requirements may result in continued suspension.
- The Approved Certifier's membership of the Scheme will be withdrawn

5.0 Arranging the Audit

- 5.1 The general procedure for arranging the audit programme is as shown in Figure 1 below.

The SER Board will agree a rolling programme of audits to be undertaken.

The SER administrative team is responsible for deciding the Approved Bodies and Approved Certifiers to be audited and will assign the lead and second auditors.

To provide some continuity lead auditors and second auditors will normally conduct two consecutive audits of the same Approved Body, except that the second auditor will normally change after the first audit.

Auditors have an opportunity to reject an appointment if they believe there to be a conflict of interest.

- 5.2 In advance of the audit the administration team will supply the audit team with the following information:
- Contact details of the Approved Body and Certification Coordinator;
 - List of Certifiers to be audited and details of projects they have certified since last audit outcome notification;
 - A list of certificates issued by each of the Certifiers to be audited;
 - Application forms for the Certifier(s) and Approved Body;
 - Details of previous audits including audit reports and outcome notifications;
 - Details of CPD returns for the previous three years from each of the Certifiers to be audited.
- 5.3 The SER Administration Team will contact the Certification Coordinator at the Approved Body and notify them that an audit is required to be undertaken, the composition of the audit team, the Approved Certifiers to be audited and whether or not there is a charge to be paid for the audit. (See paragraph 5.10 for details of charges)
- 5.4 The audit should normally be undertaken within a maximum of eight weeks of the Approved Body receiving notification. Failure of the Approved Body to agree a date within this timeframe should be brought to the attention of the SER Board for consideration of appropriate actions which are likely to include suspensions of the Body and its Certifiers from the scheme until an audit has been conducted.
- 5.5 The lead auditor will contact the Certification Coordinator and agree:
- Date(s) for the audit;
 - Any time constraints on the day(s) of the audit
 - Whether or not the Certifiers wish to be present during their project audit
 - The information that is to be made available at the audit and the information that should be provided as hard copy.
- 5.6 The lead auditor will select the projects to be audited from a list of projects certified since the date of the last audit outcome notification (or, in the case of a first audit, since membership of the Scheme was granted). An audit will only consider the work done by a Certifier for a particular Body. Where a Certifier works for more than one Body then it is likely that they will be audited at each Body where they have produced a certificate.
- 5.7 The number of projects selected for possible audit will be determined by the lead auditor who will take into consideration the number, types, values, risk classifications of projects certified and the declared experience of the Certifier.
- 5.8 A maximum of five projects will be audited for each Certifier, although up to eight projects will be selected for each Certifier, to allow for situations where, on inspection at an audit, it is apparent that a project is not suitable for auditing for reasons that were not apparent when the choice of projects was made. This contingency is used to prevent an audit not being able to be completed because an insufficient number of suitable projects have been notified to the auditee in advance of the audit.

5.9 The certification activities associated with all of the certificates (stages and amendments) issued on each project will be audited, except in the case where a certificate was reviewed as part of a previous audit.

5.10 Charges for audits

5.10.1 There will be charges for certain audits as set out below. The charge, which is agreed with the Building Standards Division of the Scottish Government (BSD), is a contribution towards the cost of conducting the audit. The details of the charge will be set out in the audit notification.

5.10.2 There will not be a charge for a first audit or for any audit where the previous audit outcome notification for the Approved Body or for any Approved Certifier states a maximum of 2 years or more.

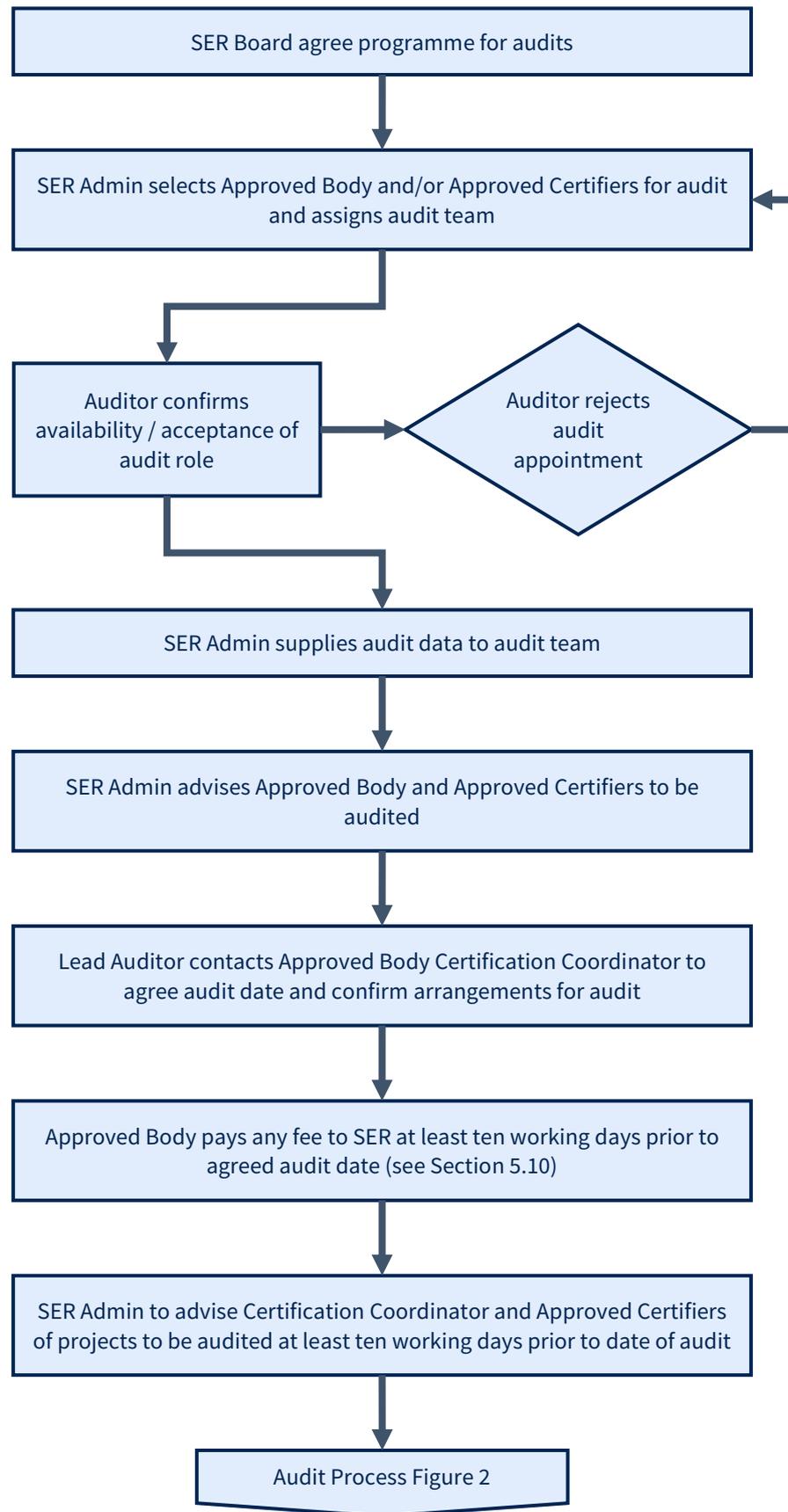
5.10.3 A charge will be payable by the Approved Body where the interval stated in the previous two audit outcome notifications for either the Approved Body or for any Approved Certifier is 1 year or less.

5.10.4 A charge will be payable by the Approved Body for any audit following mentoring and suspension.

5.10.5 A charge will be payable by the Approved Body for the first audit of any Approved Body and/or Approved Certifier who has been allowed to re-join the Scheme having previously been removed from it for poor performance.

5.10.6 If the Approved Body fails to pay the charge at least 10 working days prior to the agreed date for the audit, without having provided good reason for the non-payment, the matter will be brought to the attention of the SER Board who will consider what action should be taken, including the suspension of the Approved Body from the scheme until the payment is made.

Figure 1: Procedures for Arranging Audits

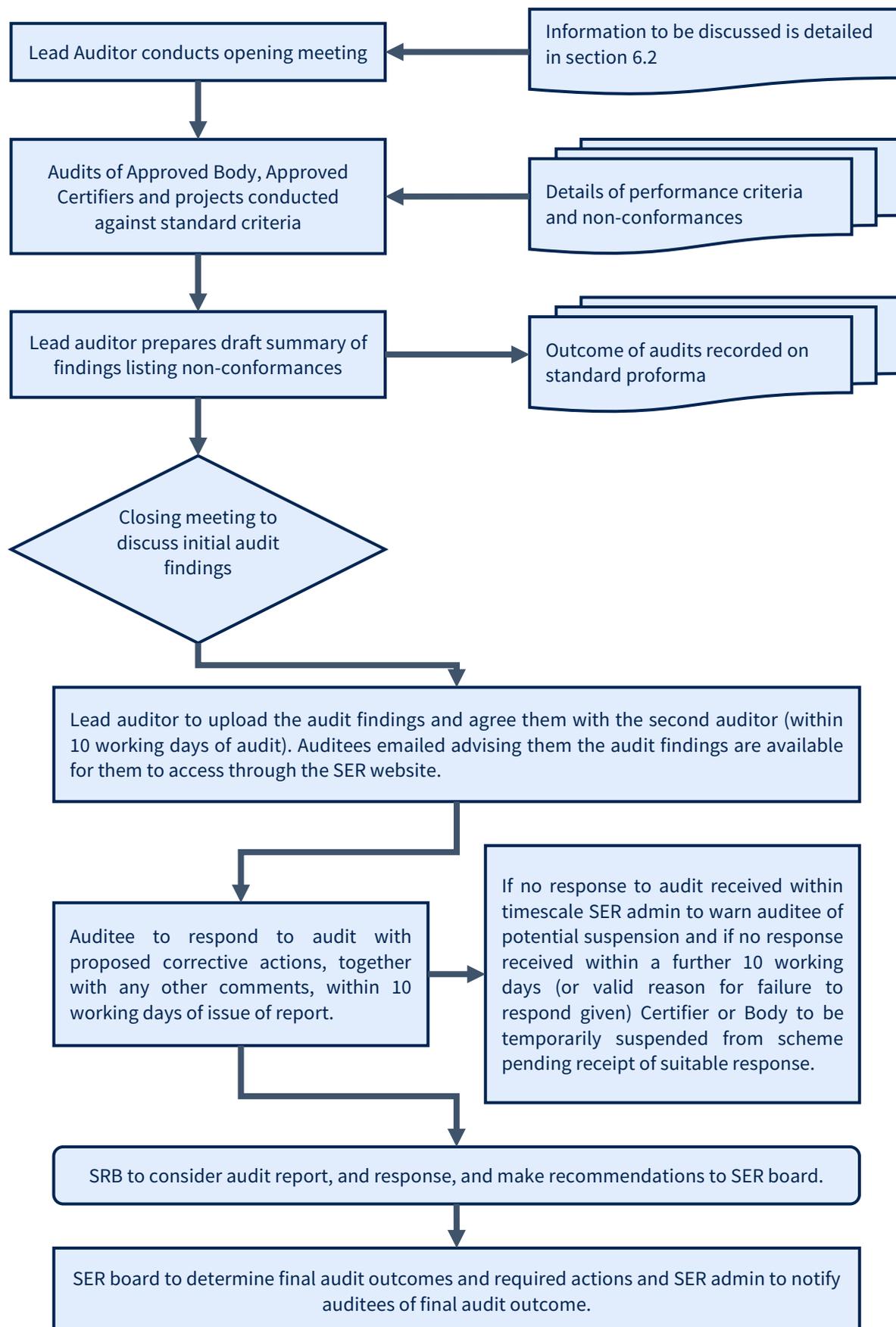


6.0 Conducting the Audit

- 6.1 General: The conducting of the audit is the responsibility of the lead auditor. Normally, the lead auditor will chair the opening and closing meetings with the auditee, will upload the audit findings, oversee the preparation of the audit report and present it to the meeting of the SRB where it is to be considered. The general procedure for conducting the audit is shown in Figure 2.
- 6.2 An opening meeting should normally be held with the Certification Coordinator and the Approved Certifiers. This should be used to explain the audit process and arrange access to information. In some instances this may take the form of an informal discussion. Matters that should be covered during this meeting include:
- Introduction of the participants and an explanation of roles;
 - Explanation of the objectives of the audit, the scope and the criteria;
 - The method and procedures to be employed including an explanation of how performance will be measured and recorded;
 - An explanation of how non-conformances are determined and their importance to establishing the audit outcome of the Body or Certifier;
 - Confirmation that the resources and facilities required by the audit team are available;
 - Confirmation of work safety and security measures relevant to the audit team;
 - Arrangements for breaks/refreshments;
 - Timescale for the audit especially the latest practicable finishing time;
 - Arrangements for the closing meeting.
- 6.3 Collecting and verifying information: Auditees shall present verifiable evidence to the auditors, from which they will determine whether or not the performance criteria have been met and whether or not findings are to be recorded.

Auditors will record the findings of the audit on standard record sheets or in an appropriate electronic format.

Figure 2: Procedures for Conducting the Audit



6.4 Lack of project records

Where, on the day of the audit, there is a total lack of records for a particular project, the matter will be recorded within the audit report for the Approved Body, along with any explanation given by the Approved Body. This will be taken into account when determining the outcome of the audit. Depending on the size and nature of the project and the explanation given for the lack of records this could result in a recommendation for suspension of the Approved Body from the scheme.

Where records for any particular project are incomplete the audit should proceed with appropriate findings raised against the Approved Body and the Approved Certifier. Where there is a credible explanation for this it should be recorded in the audit report and it will be taken into account when determining the audit outcome.

- 6.5 As noted in 1.0 the auditors will not go out of their way to look for design errors. However, it is possible that they will, while inspecting the calculations and drawings, find inconsistencies. Some of these will result in non-conformances which will be recorded in the audit report. Where it appears that the requirements of Standards 1.1 or 1.2 are not being met they should bring these matters to the attention of the Approved Body at the closing meeting and record the matter in the audit report.

The Approved Body should keep SER advised regarding action that is being taken to address the situation and if evidence of action is not forthcoming SER will consider what further measures need to be taken to address the situation.

6.6 Closing Meeting

A closing meeting should be held to present the audit findings and conclusions in such a manner that they are understood and acknowledged by the auditee. Matters that should be covered during this meeting include:

- Any circumstances encountered during the audit that may decrease reliance on the audit findings;
- The nature of any non-conformances found by the audit team and whether or not they are agreed by the auditee.
- The lead auditor should advise the auditees that they will be notified when the audit report is available on the SER IT system and that it is important that they should provide details of the corrective actions to be implemented when making their responses. Simple statements such as 'I agree' are not likely to be acceptable. Where the auditee disagrees with a non-conformance they should set out why they disagree with the finding, bearing in mind that it is the auditee's responsibility to demonstrate compliance with the performance criteria. Auditees should be advised that evidence made available to the auditors after the day of the audit will not normally invalidate a non-conformance.
- The lead auditor should advise the auditees of SRB's role in reviewing the audit report, and the auditees' proposals for corrective actions, and that this, together with a review by the SER Board will determine the final outcome of the audit.
- Any design related issues that were noted by the audit team while conducting the project audits should be discussed with the Approved Certifier and the

Certification Coordinator. The Approved Body are to be advised that they must keep SER informed of the action that they propose to take to address the situation.

7.0 Reports and Recommendations

7.1 The lead auditor is responsible for uploading the audit information into the SER IT system. This will generate separate reports covering the audits of the Approved Body and each of the Approved Certifiers. Reports should contain the following information:

- Type of audit (Approved Body or Approved Certifier)
- Name and SER reference number of auditee
- Date of audit
- Composition of audit team
- General comment on audit findings
- For Approved Body audits:
 - Details of any non-conformances
 - Audit score
- For Approved Certifier audits:
 - Applicability of performance criteria to the project and whether or not the criteria were met;
 - Details of any non-conformances for each project
 - The maximum and average scores across the range of projects audited

7.2 Standard checklists are available to assist the audit team to make notes of items audited and findings as the audit proceeds. The audit checklist should be completed during the course of the audit either by hand or electronically on a standard proforma or on line if the auditor prefers and web access is available. The checklist should be retained by the lead auditor for reference at the SRB meeting.

7.3 The audit information will normally be uploaded by the lead auditor within 5 working days of completion of the audit. The second auditor will normally agree the report within 5 working days of the lead auditor uploading the information. Where the second auditor does not initially agree with the information, the two are required to discuss and resolve their differences so that agreement is normally reached within 10 working days of the completion of the audit.

8.0 Actions Arising from the Audit

8.1 Action by an Approved Body:

8.1.1 The Approved Body will be notified by email as soon as the audit information has been uploaded and agreed by both auditors as correct. Within 10 working days of the audit report being uploaded the certification coordinator shall log into the Body's administrative area and enter the details of the corrective actions that the Body proposes to take to avoid a reoccurrence of any of the reported non-conformances together with any other comments. These will be considered by the SRB when it makes recommendations to the SER Board on the outcome of the audit.

8.1.2 If the Approved Body has not responded within a further 10 working days (or a valid reason for the failure to respond is not given) the Approved Body will be suspended from the Scheme pending receipt of suitable responses (see Figure 2).

8.2 Action by an Approved Certifier

8.2.1 The Approved Certifier will be notified by email as soon as the audit information has been uploaded and agreed by both auditors as correct. Within 10 working days of the audit report being uploaded the Approved Certifier shall log into their administrative area and enter the details of the corrective actions that they propose to take to avoid a reoccurrence of any of the reported non-conformances together with any other comments. These will be considered by the SRB when it makes recommendations to the SER Board on the outcome of the audit.

8.2.2 If the Approved Certifier has not responded within a further 10 working days (or a valid reason for the failure to respond has not been given) the Approved Certifier will be suspended from the Scheme pending receipt of suitable responses (see Figure 2).

8.3 Action by SRB

8.3.1 The SRB will consider the audit report and any other relevant information before arriving at an audit outcome recommendation. Factors to be taken into account when considering what outcome should be recommended to the SER Board are given in 4.7 and 4.8.

8.3.2 Where non-conformances have been identified but no corrective action has been proposed by the auditee the SRB may consider recommending suspension from membership of the Scheme until this is forthcoming.

8.4 Action by the SER Board.

The SER Board is responsible for confirming or amending the recommendations of the SRB. The Head of Certification will advise Approved Bodies and Approved Certifiers of the outcome of the audit and any action that has been decided by SER Board.

9.0 Representations to the SER Board

9.1 Approved Bodies and Approved Certifiers may, after the issue of an audit outcome notification, make representations to the Board of SER concerning:

- Any action that has been imposed by the Board of SER as the result of the audit
- The way in which the audit was conducted

9.2 Representations to the Board shall be made in writing to SER, marked for the attention of the Company Secretary, within 20 working days of the date of the audit outcome notification. They must clearly state all the grounds on which the audit is disputed.

9.3 The Board may take whatever action it deems appropriate in the circumstances.

Actions may include, but are not limited to:

- Confirming the outcome of the audit
- Varying the outcome of the audit
- Referring the audit report and the representations made by the auditee to:
 - The auditors
 - The SRB or its Chairman for comment prior to making a decision
- Setting aside the audit and ordering a fresh audit with a new audit team

9.4 The Board shall have three months from the date on which the representations are received by SER to respond to the auditee.

10.0 Appeals

10.1 Appeals may only be lodged if a representation on the matter disputed has previously been made to the Board of SER (See 9.0).

10.2 Approved Bodies and Approved Certifiers may lodge an appeal individually or, in the case where a finding concerning the actions of a Certifier has arisen from the procedures and/or practices imposed by his/her employing Approved Body, a joint appeal may be made.

10.3 Appeals may be lodged concerning:

- Any action that has been imposed by the Board of SER as the result of the audit
- The way in which the audit was conducted

or where the Board of SER has failed to respond to a representation made to it within three months.

10.4 Appeals shall be made in writing to SER, marked for the attention of the Company Secretary, within 20 working days of the date of the response to representations from the Board (or the date on which the period for the Board to respond expired). They must clearly state all the grounds on which the decision is disputed.

10.5 If an Approved Certifier or Approved Body lodges an appeal this will be considered by an Appeals Panel which will be constituted and will operate under the powers and procedures described in SER's 'Complaints and Disciplinary and Appeal Procedures'.

Scheme for Certification of Design (Building Structures)



Audit Rules
Criteria for the Assessment of Approved Bodies

Appendix A

1 Requirements for Membership of the Scheme

Approved Bodies will have made a number of declarations, in their application, demonstrating compliance with the criteria for membership of the Scheme. The accuracy of these declarations will be checked by the audit.

Key Factors

The Building (Scotland) Procedures Regulations 2004 set out criteria which can be considered to promote good practice. These are financial probity, insurance relevant to certification, adoption of quality assurance systems with regard to checking design and ready access to appropriate standards and guidance documents. SER has incorporated these into the criteria for membership of Approved Bodies to the Scheme and added an additional requirement in relation to training of certification staff.

Reference	Performance Criteria	Major Non-conformances	Improvement Issues
A1.1	Appointment of Certification Coordinator Approved Bodies shall appoint a Certification Coordinator who will monitor that the conditions under which membership of the scheme was granted are being fulfilled and maintained and will bring any shortcomings to the attention of the management of the Approved Body.	The Certification Coordinator clearly does not understand the conditions under which membership of the scheme were granted. A lack of evidence that the Certification Coordinator is monitoring that the conditions under which membership of the scheme was granted are being fulfilled and maintained. Failure of the management of the Approved Body to take action when shortcomings are identified.	Deficiencies in the Certification Coordinator's understanding of the conditions under which membership of the scheme were granted.
A1.2	Quality and Checking Procedures Approved Bodies shall adopt quality and checking procedures that are appropriate to the size and complexity of the work being undertaken to ensure that the scheme requirements are met.	Absence of a structured approach to checking designs. Failure to implement checking procedures that will ensure that the scheme requirements are met.	Deficiencies in the implementation of checking procedures that will ensure that the scheme requirements are met.

Reference	Performance Criteria	Major Non-conformances	Improvement Issues
A1.3	<p>Access to Information</p> <p>Approved Bodies shall provide access to technical information that is adequate for the type of work being certified.</p> <p>Approved Bodies shall monitor that technical information being used for the design of the work that is being certified is current and has not been superseded.</p>	<p>No readily available access to up to date technical information necessary to undertake the scope of work being certified.</p>	<p>A lack of evidence to demonstrate that the currency of technical information being used for the design of the work that is being certified is being monitored.</p>
A1.4	<p>Training</p> <p>Approved Bodies shall support the CPD of all Approved Certifiers employed or engaged by the Body</p>	<p>A lack of evidence to show that the Approved Body is supporting the CPD of Approved Certifiers working for the Approved Body.</p> <p>A lack of evidence to demonstrate that the Approved Body is monitoring the level of CPD being undertaken by its Approved Certifiers</p>	<p>Deficiencies in the level of support being provided by the Approved Body.</p> <p>Any one of the Certifiers failing to undertake CPD which is appropriate to the size and complexity of the projects being certified.</p>
A1.5	<p>Insurance</p> <p>Approved Bodies shall maintain Professional Indemnity Insurance at a level appropriate to the scale of work being certified</p>	<p>No evidence that PI insurance is being maintained made available at audit</p>	<p>N/A</p>
A1.6	<p>Employment</p> <p>Approved Bodies shall employ at least one Approved Certifier</p>	<p>Absence of evidence to demonstrate that the Approved Body employed an Approved Certifier, at a time when certificates were being countersigned by the Certification Coordinator.</p>	<p>N/A</p>

2 Duties of an Approved Body

The Approved Body is required by the Scheme to provide an environment that supports the Certifiers that it employs and must ensure that adequate resources are allocated to the certification role.

Key Factors

Contractual arrangements for the provision of certification services must be made on the basis of appropriate terms and conditions which take account of the risks and liabilities associated with the certification role and provide a reasonable degree of protection to certifiers employed by the Approved Body.

Reference	Performance Criteria	Major Non-conformances	Improvement Issues
A2.1	<p>Protection of Certifiers from Financial Loss (not required for sole practitioners)</p> <p>Approved Bodies shall take a responsible approach to protecting their Approved Certifiers against the consequences of claims arising from certification appointments.</p>	Failure to make reasonable provision in appointments to prevent clients seeking to recover loss from Certifiers, whether current or former employees.	No evidence that PI insurers have confirmed that their PI indemnifies current and former employees in respect of claims against individuals both during and after employment.
A2.2	<p>Management of Risk</p> <p>Approved Bodies shall assess the risks associated with an appointment to undertake certification and shall make appointments on contractual terms and conditions that manage the risk.</p>	No evidence that the Approved Body is actively managing contractual risks in appointments that involve certification.	N/A
A2.3	<p>Management of Certifier Activities</p> <p>Approved Bodies shall encourage the application of SER guidance and procedures by the Approved Certifiers in its employment.</p>	<p>Failure to take any steps to monitor and coordinate Certifiers' activities.</p> <p>Poor performance of Certifiers with any Certifier obtaining a project score of 20 or greater.</p>	Inconsistent performance of Certifiers (as determined by their audit outcome) with any Certifier obtaining a project score of 14 or greater.

Reference	Performance Criteria	Major Non-conformances	Improvement Issues
<p>A2.4</p>	<p>Management of Post Certification Design Changes</p> <p>Approved Bodies shall have procedures in place to manage post-certification design changes and shall inform the Certifier of such changes.</p> <p>Approved Bodies shall ensure that Approved Certifiers in its employment are aware of the recommendations provided in SER Guidance Note 8.</p>	<p>Failure to take reasonable steps to obtain confirmation as to the drawings, etc. that were submitted with the warrant application.</p> <p>Failure to manage post-certification design changes and, where there have been changes to the structural design, to inform the person(s) responsible for the issue of the warrant application and/or issue of construction drawings that there have been post-certification design changes which affect the reliability of the certificate and that an Amendment to Warrant and amended certificate is required.</p>	<p>Failure to inform the person(s) responsible for the issue of the warrant application and/or issue of construction drawings that any design changes reflected on drawings issued subsequent to those on which the certificate was based, as noted on the Schedule to the certificate listing the information used for certification, are not covered by the certificate and may require the submission of an Amendment to Warrant and an amended design certificate.</p>
<p>A2.5</p>	<p>Maintenance of Records</p> <p>Approved Bodies shall maintain adequate records of projects and to shall present such records in a manner suitable for audit at such dates and times as may be arranged to allow SER to monitor and assess their activities.</p>	<p>Failure to present adequate records for audit for any single project.</p>	<p>Records presented for audit are deficient with respect to some minor elements.</p>
<p>A2.6</p>	<p>Use of Approved Certifier Registration Mark</p> <p>If the Approved Body uses the Approved Certifier Registration Mark then it shall use it in accordance with the guidelines issued by BSD.</p>	<p>N/A</p>	<p>Using the Registration Mark outwith the guidelines issued by BSD.</p>

Scheme for Certification of Design (Building Structures)



Audit Rules
Criteria for the Assessment of Projects

Appendix B

1 Procedures and Planning

Approved Certifiers are required, in accordance with SER guidance, to prepare a design audit plan and maintain records of decisions taken in relation to a project.

Key Factors

The Certification Plan will assist the Certifier to assemble all of the necessary information and conduct the design audit in an organised manner. It is essential for the Certifier to properly identify the full scope of structural works covered by the design certificate. Certificates should only be signed once design has been completed to an appropriate level.

Reference	Performance Criteria	Major Non-conformances	Improvement Issues
B1.1	<p>Certification Procedures and Records</p> <p>Certifiers shall plan and undertake the certification activities in an organised manner.</p> <p>Certifiers shall identify all of the structural elements that are covered by the design certificate(s).</p> <p>Certifiers shall maintain records of the certificates issued, showing how compliance with the Regulations was established.</p>	<p>No evidence of an organised approach to managing the certification process.</p> <p>No evidence of an organised approach to identifying the scope of structural design appropriate to the scale of the project.</p> <p>The approach to certification is grossly inadequate in relation to the size of the project.</p> <p>Grossly inadequate records of the certification process</p>	<p>Insufficient evidence of an organised approach to managing the certification process e.g. lack of or inadequate certification plan</p> <p>Insufficient evidence of an organised approach to identifying the scope of the structural design</p> <p>The level of checking in respect of any single aspect of the project has been incorrectly identified.</p> <p>Inadequate or poorly presented records.</p>
B1.2	<p>Project Records</p> <p>Certifiers shall see that the project records are comprehensive, well-presented and meet the scheme requirements.</p>	<p>Grossly inadequate records.</p>	<p>Insufficient, inadequate or poorly presented records.</p>
B1.3	<p>Programming of Work</p> <p>Certifiers shall not sign the design certificate until they are satisfied that the design has been completed and checked to an appropriate standard.</p>	<p>Design certificate(s) signed before the design of all of the elements is complete, except where the element is listed on schedule 1.</p>	<p>N/A</p>

Reference	Performance Criteria	Major Non-conformances	Improvement Issues
<p>B1.4</p>	<p>Use of Third Party Designed Details Option</p> <p>Certifiers shall only use Schedule 1 as described in guidance published by BSD and SER.</p> <p>Certifiers shall advise the Client and/or any Agent acting on behalf of the Client of the implications of using Schedule 1.</p>	<p>Using the option in a manner clearly contrary to the intent described in published guidance.</p>	<p>Failure to advise the Client and/or any Agent acting on behalf of the Client of the implications of using Schedule 1.</p> <p>Failure to issue an interim Form Q at the appropriate time for any element on Schedule 1 the design for which had been finalised, reviewed and met the requirements of the performance specification, except where there are documented reasons for not having done so.</p> <p>Failure to sign and issue Form Q prior to completion of project when the designs for all of the elements on Schedule 1 had been finalised and reviewed and met the requirements of the appropriate performance specifications, except where there are documented reasons for not having done so.</p>

2 General Design Overview and Parameters

Certification and checking are separate activities. Certification cannot be delegated to a third party while design checks can only be undertaken by an individual with the necessary experience in the particular aspect of the check.

Key Factors

Generally sub-classifications listed in this section cannot be delegated and Certifiers must present evidence that they have reviewed and approved the fundamental design decisions involved.

Reference	Performance Criteria	Major Non-conformances	Improvement Issues
B2.1	<p>Loading Assessment</p> <p>Certifiers shall check that a loading assessment has been carried out and shall satisfy themselves that the correct loadings have been used for the design</p>	<p>The loadings used in the design clearly do not meet the requirements of the Standards.</p> <p>Absence of suitably checked loading calculations and/or assessment for any significant load case.</p> <p>Serious inconsistencies in loading between different designers.</p>	<p>Inadequate/insufficient calculations and/or assessment</p>
B2.2	<p>Overall Stability</p> <p>Certifiers shall satisfy themselves that adequate measures have been taken to ensure the stability of the building and the stability of any part of another building.</p>	<p>The measures taken to ensure stability of the building clearly do not meet the requirements of the Standards.</p> <p>Absence of or grossly inadequate statement describing how stability of the building will be achieved.</p> <p>Absence of or grossly inadequate consideration of the factors that could affect the stability of an adjacent building.</p> <p>Absence of or grossly inadequate checked calculations, or other justification, showing how the lateral loads will be distributed to the resisting elements.</p>	<p>Inadequate statement describing how stability of the building will be achieved.</p> <p>Inadequate consideration of the factors that could affect the stability of an adjacent building.</p> <p>Inadequate checked calculations, or other justification, showing how the lateral loads will be distributed to the resisting elements.</p>

Reference	Performance Criteria	Major Non-conformances	Improvement Issues
<p>B2.3</p>	<p>Disproportionate Collapse</p> <p>Certifiers shall satisfy themselves that an adequate risk assessment has been undertaken to identify the measures required to satisfy Standard 1.2.</p>	<p>The risk assessment has clearly failed to identify the measures required to meet the requirements of the Standards.</p> <p>Failure to demonstrate that a risk appraisal concerning the need to take account of this aspect of the design has been undertaken.</p> <p>Failure to demonstrate how the measures intended to address the specific requirements arising out of the risk appraisal will be applied as part of the design of the building.</p>	<p>Inadequate risk appraisal.</p> <p>Inadequate demonstration of the measures being taken to address the specific requirements arising out of the risk appraisal</p>
<p>B2.4</p>	<p>Conversions</p> <p>Where the design proposal involves a change of use Certifiers shall satisfy themselves that an adequate assessment of the implications of the change of use in accordance with Regulation 12 and the requirement for strengthening of the building has been carried out.</p>	<p>The assessment undertaken has clearly failed to identify the measures required to meet the requirement of Regulation 12.</p> <p>Failure to consider, or grossly inadequate consideration of the requirements of Regulation 12.</p>	<p>Superficial or inadequate consideration of the requirements of Regulation 12.</p>
<p>B2.5</p>	<p>Structural Movement Joints</p> <p>Certifiers shall satisfy themselves that the provision of structural movement joints is adequate.</p>	<p>The provision of structural movement joints clearly does not meet the requirements of the Standards.</p> <p>Failure to demonstrate that the need to provide structural movement joints has been considered for large or complex buildings.</p>	<p>Failure to demonstrate that the need to provide structural movement joints has been considered for minor extensions, etc.</p>

3 Reports and Investigations

Reports and Investigations are frequently required in order to provide the designer with sufficient information to safely design the structure. Certifiers must review whether sufficient information has been gathered to support assumptions made by the design team and whether this information has been obtained from a reliable source.

Key Issues

Those employed to undertake investigations must be experienced and competent to do so. The scope of any investigations commissioned must be based on a rational assessment of the information required. Any testing must be carried out by a testing organisation accredited for the purpose and employing industry standard methodologies.

Reference	Performance Criteria	Major Non-conformances	Improvement Issues
B3.1	<p>Ground Investigation Reports</p> <p>Certifiers shall check that an adequate ground investigation has been carried out and shall review the scope of the investigation and the contents of the report to satisfy themselves that the conclusions and recommendations are appropriate.</p> <p>Certifiers shall check that the investigation takes account of the effect of any new building works on the stability of existing buildings in the vicinity of those works.</p> <p>In those circumstances where it is considered that a ground investigation is not required Certifiers shall ensure that the reasons why it is not considered necessary are recorded.</p> <p>Certifiers shall satisfy themselves that sufficient enquiry and/or investigation has been made to confirm that the proposed site will not be influenced by unconsolidated mineral workings.</p>	<p>Failure to demonstrate that an adequate ground investigation was undertaken in relation to the design of the foundations.</p> <p>Failure to demonstrate that an adequate review of the findings/recommendations was carried out by the Certifier.</p> <p>Failure to demonstrate that adequate enquiry regarding mineral workings was carried out in an area for such activity.</p>	<p>Deficiencies in the scope of the ground investigation in relation to the design of the foundations.</p> <p>Absence of a record as to why a ground investigation was not carried out for a minor project.</p> <p>Absence of a record as to why a mineral investigation was not carried out for a minor project in an area known for such activity.</p>

<p>B3.2</p>	<p>Existing Buildings Appraisal</p> <p>Certifiers shall satisfy themselves that a sufficiently detailed appraisal of the effect on the existing building(s) and any buildings in the vicinity of the proposed works has been carried out and that the conclusions and recommendations are appropriate.</p> <p>Where the warrant application involves alterations to or a change of use of an existing building, Certifiers shall satisfy themselves that a sufficiently detailed appraisal of the existing structure has been carried out, that a written assessment of the effects of the proposed works has been prepared and that the conclusions and recommendations are appropriate.</p>	<p>No evidence that an appraisal of the effect on the existing building(s) and any buildings in the vicinity of the proposed works was undertaken.</p> <p>Failure to produce a report of the appraisal for all but minor projects.</p> <p>No evidence that an appraisal undertaken by others was reviewed by the Certifier</p>	<p>Failure to produce a report of the appraisal for a minor project.</p> <p>Inadequate record of the appraisal.</p> <p>Deficiencies in the scope of the report or the methodology used.</p>
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4 Design (Principal Structure)

Design embraces a wide range of activities however the Certifier should focus on the analysis of the final scheme. Detailing must be seen as an integral and important part of the design process. Acceptable design methodologies include the codes and standards listed in the Technical Handbooks accompanying the regulations.

Key Factors

Certifiers are responsible for ensuring the integrity of the process used to prepare and check the final scheme design. Certification and checking are separate activities. Certification cannot be delegated to a third party while design checks may only be undertaken by an individual with the necessary experience in the particular aspect of the check.

Reference	Performance Criteria	Major Non-conformances	Improvement Issues
B4.1	Mineral Consolidation Certifiers shall satisfy themselves that the design of the foundations allows for the presence of shallow mine workings, the collapse of which could result in surface movements that will cause settlement of the foundations, where this has been revealed in the ground investigation.	Failure to provide a credible statement as to why mineral consolidation measures were not adopted where a significant settlement risk to the building has been identified. Failure to demonstrate that the extent of the mineral consolidation works has been identified or defined. Failure to demonstrate that the mineral consolidation measures undertaken or to be undertaken have been assessed and that these are taken into account in the design of the foundations.	Failure to indicate the extent of any mineral consolidation works on the warrant plans.

Reference	Performance Criteria	Major Non-conformances	Improvement Issues
<p>B4.2</p>	<p>Substructure (including ground floor slab but excluding piling)</p> <p>Certifiers must satisfy themselves that adequate details for the foundations (and/or pile caps) have been prepared and that sufficient design calculations, which take account of the overall loadings and the findings of the ground investigation report, have been undertaken to demonstrate the adequacy of the design.</p>	<p>The design of the substructure clearly fails to meet the requirements of Standard 1.1.</p> <p>Absence of suitably checked structural calculations and/or details for any primary element of substructure, except for precast foundations systems for RC1 buildings which were included on Schedule 1.</p> <p>Calculations and/or details are grossly inadequate in relation to the size/complexity of the project.</p> <p>Failure to document why there are discrepancies between the recommendations in the ground investigation report for the design of the foundations and the parameters used in the design.</p> <p>Absence of performance specification and details on the warrant plans, where the design of any precast foundation system was included on Schedule 1 (Only applies to RC1 buildings)</p> <p>Absence of calculations, etc. to justify the preliminary design shown on the warrant plans, where the design of any precast foundation system was included on Schedule 1 (Only applies to RC1 buildings)</p> <p>Absence of evidence demonstrating that the Certifier made adequate enquiry regarding the design of any precast foundation system and/or the experience of those undertaking the design where this was prepared by an external specialist/third party.</p> <p>Absence of evidence to demonstrate that adequate enquiry and checks of a third party's design for any precast foundation system had been carried out before an interim or final Form Q was signed. (Only applies to RC1 buildings)</p> <p>Absence of evidence to show that there has been adequate enquiry to establish the provisions required to meet Standards 3.1 and 3.2.</p>	<p>Deficiencies in the building warrant plans e.g. failure to identify foundation locations, dimensions, changes of level, material specification and typical reinforcement details.</p> <p>Absence of a note on warrant plans recording anticipated ground conditions and required bearing pressure.</p> <p>Inadequate or insufficient calculations.</p> <p>Inadequate performance specification and details on the warrant plans, where the design of any precast foundation system was included on Schedule 1. (Only applies to RC1 buildings)</p> <p>Inadequate calculations, etc. to justify the preliminary design shown on the warrant plans, where the design of any precast foundation system was included on Schedule 1. (Only applies to RC1 buildings)</p> <p>Inconsistencies between the design finalised by external specialist/third party and the performance specification submitted as a part of the warrant application, where an interim or final Form Q was submitted in respect of the design of any precast foundation system that was included on Schedule 1. (Only applies to RC1 buildings)</p> <p>Insufficient evidence to show that there has been adequate enquiry to establish the provisions required to meet Standards 3.1 and 3.2.</p>

Reference	Performance Criteria	Major Non-conformances	Improvement Issues
<p>B4.3</p>	<p>Piling</p> <p>Certifiers must satisfy themselves that adequate details for the piling have been prepared and that sufficient design calculations, which take account of the overall loadings and the findings of the ground investigation report, have been undertaken to demonstrate the adequacy of the design.</p> <p>Where Schedule 1 has been used Certifiers must satisfy themselves that adequate details for the piling have been prepared, that sufficient preliminary calculations have been undertaken or that there is other justification to demonstrate the adequacy of the solution proposed and that an adequate performance specification has been prepared.</p>	<p>The design for the piling clearly does not meet the requirements of Standard 1.1.</p> <p>Calculations and/or details are grossly inadequate in relation to the size/complexity of the project.</p> <p>Absence of performance specification and details on the warrant plans, where piling was included on Schedule 1</p> <p>Absence of suitably checked calculations or other justification for the preliminary design shown on the warrant plans, where piling was included on Schedule 1</p> <p>Absence of evidence demonstrating that the Certifier made adequate enquiry regarding the pile design and/or the experience of those undertaking the design where this was prepared by an external specialist/third party.</p> <p>Absence of evidence to demonstrate that adequate enquiry and checks of a third party's design for the piling had been carried out before an interim or final Form Q was signed.</p> <p>Drawings/specification do not describe requirements for site testing.</p>	<p>Deficiencies in the warrant plans e.g. failure to identify pile type, size, locations, SWL and indicative cut off levels.</p> <p>Inadequate or insufficient calculations-</p> <p>Inadequate performance specification and details on the warrant plans, where piling was included on Schedule 1.</p> <p>Inadequate calculations or other justification for the preliminary design shown on the warrant plans, where piling was included on Schedule 1.</p> <p>Inconsistencies between the design finalised by external specialist/third party and the performance specification submitted as a part of the warrant application, where an interim or final Form Q has been submitted in respect of the design of the piling that was included on Schedule 1.</p> <p>Requirement for site testing inadequately described on the drawings or in the specification.</p>
<p>B4.4</p>	<p>Earth Retaining Structures</p> <p>Certifiers must satisfy themselves that adequate details for any earth retaining structures have been prepared and that sufficient design calculations, which take account of the findings of the ground investigation report, have been undertaken to demonstrate the adequacy of the design.</p>	<p>The design of any earth retaining structures clearly does not meet the requirements of Standard 1.1.</p> <p>Absence of suitably checked structural calculations and/or details.</p> <p>Calculations and/or details are grossly inadequate in relation to the size/complexity of the project.</p> <p>Failure to document why there are discrepancies between the recommendations in the ground investigation report for the design of the earth retaining structures and the parameters used in the design.</p>	<p>Deficiencies in the building warrant plans e.g. failure to identify layout, level changes, dimensions, construction and typical reinforcement details.</p> <p>Inadequate or insufficient calculations.</p>

Reference	Performance Criteria	Major Non-conformances	Improvement Issues
<p>B4.5</p>	<p>Ground Improvement</p> <p>Where ground improvement techniques are proposed to improve the nature of the ground, Certifiers must satisfy themselves that the level of performance specified for the treated ground is compatible with that assumed in the calculations for the design of the foundations and that there has been reasonable enquiry to see that the required performance can be achieved.</p> <p>Where ground improvement techniques have been used to improve the nature of the ground, Certifiers shall satisfy themselves that adequate testing has been carried out to demonstrate the improved nature of the ground and that the test results have been made available to the designer of the foundations.</p>	<p>Failure to demonstrate that the ground improvement measures undertaken or to be undertaken have been assessed and that these are taken into account in the design of the foundations.</p> <p>Drawings/specification do not describe requirements for site testing, where the works are still to be undertaken.</p> <p>Failure to demonstrate that the extent of the ground improvement measures has been identified or defined.</p>	<p>Failure to indicate the extent of any ground improvement works on the warrant plans.</p> <p>Requirement for site testing inadequately described on the drawings or in the specification, where the works are still to be undertaken.</p>
<p>B4.6</p>	<p>Superstructure – Principal load-bearing elements</p> <p>Certifiers shall satisfy themselves that adequate details have been prepared for all principal load-bearing structural elements, including structural frames, beams, columns walls, floors, roofs, and that sufficient calculations have been prepared in accordance with an acceptable methodology to demonstrate the adequacy of the design.</p>	<p>The design of any of the principal loadbearing elements clearly does meet the requirements of Standards 1.1 and 1.2.</p> <p>Absence of suitably checked structural calculations, load/span tables, test certification or other justification for the design of any primary loadbearing element, or for any other important elements of structure.</p> <p>Absence of suitably checked drawings/details.</p> <p>Grossly inadequate details for superstructure elements on the warrant drawings</p> <p>Absence of performance specification and details on the warrant plans, where either precast concrete floors, precast concrete staircases or timber roof trusses were included on Schedule 1</p> <p>Absence of calculations, etc. to justify the preliminary design shown on the warrant plans where either precast concrete floors and staircases or timber roof trusses were included on Schedule 1</p> <p>Absence of evidence demonstrating that the Certifier made adequate enquiry regarding the design any element and/or the experience of those undertaking the design where this was prepared by an external specialist/third party.</p>	<p>Inadequate or insufficient details on the building warrant plans</p> <p>Inadequate or insufficient structural calculations, load/span tables, test certification or other justification for the design of any primary loadbearing element of structure.</p>

Reference	Performance Criteria	Major Non-conformances	Improvement Issues
<p>B4.7</p>	<p>Superstructure – Stability elements</p> <p>Certifiers shall satisfy themselves that adequate details have been prepared for all stability elements, including bracing, shear walls, moment resisting frames, and that sufficient calculations have been prepared in accordance with an acceptable methodology to demonstrate the adequacy of the design.</p>	<p>The design of any of the stability elements clearly does not meet the requirements of Standards 1.1 and 1.2.</p> <p>Absence of suitably checked structural calculations for any stability element.</p> <p>Absence of suitably checked drawings/details.</p> <p>Grossly inadequate details for stability elements on the warrant drawings</p> <p>Members used to provide stability of the building are not shown on the warrant plans. (Lack of identification of members as stability elements is an improvement issue)</p>	<p>Inadequate or insufficient details on the building warrant plans.</p> <p>Inadequate or insufficient structural calculations for the design of any stability element.</p> <p>Members used to provide stability of the building are not identified as stability elements on the warrant plans, e.g. Internal and external racking/shear walls, bracing, moment-frames.</p>
<p>B4.8</p>	<p>Superstructure – Other elements</p> <p>Certifiers shall satisfy themselves that adequate details have been prepared for all other elements, including secondary beams trimmers, staircases, etc., and that sufficient calculations have been prepared in accordance with an acceptable methodology to demonstrate the adequacy of the design.</p>	<p>The design of any of the other superstructure elements clearly does not meet the requirements of Standards 1.1 and 1.2.</p> <p>Absence of suitably checked structural calculations, load/span tables, test certification or other justification for the design of any other important elements of structure.</p> <p>Absence of suitably checked drawings/details.</p> <p>Grossly inadequate details for other elements on the warrant drawings</p>	<p>Inadequate or insufficient details on the building warrant plans</p> <p>Inadequate or insufficient structural calculations, load/span tables, test certification or other justification for the design of any other element of structure.</p>

Reference	Performance Criteria	Major Non-conformances	Improvement Issues
<p>B4.9</p>	<p>Structural Ties, Fixings and Connections</p> <p>Certifiers shall satisfy themselves that adequate details have been prepared for all ties, fixings and connections and that there are adequate calculations or other evidence to demonstrate the adequacy of the details used.</p>	<p>The design of the ties fixings and connections clearly does not meet the requirements of Standards 1.1 and 1.2.</p> <p>Absence of suitably checked details</p> <p>Absence of suitably checked structural calculations, load tables, test certification or other justification for the design.</p> <p>Calculations, etc. and/or details are grossly inadequate in relation to the size/complexity of the project.</p> <p>Absence of suitably checked performance specification, connection loads and typical details on the warrant plans, where steelwork connections were included on Schedule 1</p> <p>Absence of suitably checked calculations, etc. to justify the connection loads shown on the warrant plans, where steelwork connections were included on Schedule 1</p> <p>Absence of evidence demonstrating that the Certifier made adequate enquiry regarding the design of the steelwork connections and/or the experience of those undertaking the design where this was prepared by an external specialist/third party.</p> <p>Absence of evidence to demonstrate that adequate enquiry and checks of a third party's design for the steelwork connections had been carried out before an interim or final Form Q was signed.</p>	<p>Deficiencies in the warrant plans</p> <p>Inadequate or insufficient calculations, details, etc.</p> <p>Inadequate performance specification and details on the warrant plans, where steelwork connections were included on Schedule 1.</p> <p>Inadequate calculations, etc. to justify the preliminary design shown on the warrant plans, where steelwork connections were included on Schedule 1</p> <p>Inconsistencies between the design finalised by external specialist/third party and the performance specification submitted as a part of the warrant application, where an interim or final Form Q was submitted in respect of the design of the steelwork connections that were included on Schedule 1.</p>

5 Design (Building Envelope)

The building envelope is required to fulfil a wide range of building regulation requirements. While the envelope will frequently not contribute to the strength and stability of the building structure it will require to support its own weight, transfer wind loads into the structure and remain attached to the building under the effects of wind load.

Key Factors

The Standing Committee on Structural Safety (SCOSS) has highlighted a number of potential problems arising from deficiencies in design. The strength and durability of the cladding material, support structure and crucially the fixing systems must be sufficient to withstand climatic conditions.

Reference	Performance Criteria	Major Non-conformances	Improvement Issues
B5.1	<p>Building Envelope (including cladding and glazing)</p> <p>Certifiers shall satisfy themselves that adequate details have been prepared for the external envelope of the building and that there are sufficient calculations or other evidence to demonstrate the adequacy of the design.</p> <p>Certifiers shall satisfy themselves that the design of the external envelope is compatible with the design of the supporting structure, particularly with respect to deflection.</p> <p>Where Schedule 1 has been used for the certification of glazing on RC1 structures Certifiers must satisfy themselves that adequate details have been prepared and that there are sufficient preliminary calculations or other evidence to demonstrate the adequacy of the solution proposed.</p> <p>Where a Form Q is required, Certifiers shall review the calculations and details for the finalised design and satisfy themselves that they meet the requirements of the appropriate performance specification.</p>	<p>The design of the building envelope clearly does not meet the requirements of Standards 1.1 and 1.2.</p> <p>Absence of suitably checked structural calculations, load/span tables, test certification or other justification for the design of any element of the building envelope.</p> <p>Absence of suitably checked drawings/details.</p> <p>Grossly inadequate details for any element of the building envelope.</p> <p>Absence of evidence demonstrating that the Certifier considered the compatibility of the elements of the external envelope and the supporting structure.</p> <p>Absence of performance specification and details on the warrant plans, where glazing was included on Schedule 1 (RC1 buildings only)</p> <p>Absence of calculations, etc. to justify the preliminary design shown on the warrant plans, where glazing included on Schedule 1 (RC1 buildings only)</p> <p>Absence of evidence demonstrating that the Certifier made adequate enquiry regarding the design of any element of the building envelope and/or the experience of those undertaking the design where this was prepared by an external specialist/third party.</p>	<p>Inadequate or insufficient calculations or other justification for the design of any element of the building envelope.</p> <p>Inadequate or insufficient details for any element of the building envelope.</p> <p>Inadequate consideration of the compatibility of the elements of the external envelope and the supporting structure.</p> <p>Insufficient evidence demonstrating that the Certifier made adequate enquiry regarding the design of any element of the building envelope and/or the experience of those undertaking the design where this was prepared by an external specialist/third party.</p>

Reference	Performance Criteria	Major Non-conformances	Improvement Issues
<p>B5.2</p>	<p>Building Envelope Fixings and Supports (including purlins, sheeting rails, etc.)</p> <p>Certifiers shall satisfy themselves that adequate details of the fixings and supports for the external envelope of the building have been prepared and that there are sufficient calculations or other evidence to demonstrate the strength and durability of the design.</p>	<p>The design of the fixings and supports which form part of the external envelope clearly does not meet the requirements of Standards 1.1 and 1.2.</p> <p>Absence of suitably checked drawings/details.</p> <p>Grossly inadequate details of the fixings or supports.</p> <p>Absence of suitably checked structural calculations, load/span tables, test certification or other justification for the design of any of the fixings and supports</p> <p>Absence of evidence demonstrating that the Certifier made adequate enquiry regarding the design of any fixings and supports and/or the experience of those undertaking the design where this was prepared by an external specialist/third party.</p>	<p>Inadequate or insufficient details of the fixings or supports.</p> <p>Insufficient or inadequate calculations other justification for the design.</p>
<p>B5.3</p>	<p>Building Envelope Movement Joints</p> <p>Certifiers shall satisfy themselves that the provision of movement joints in the building envelope is adequate and that appropriate details have been prepared.</p>	<p>The provision of movement joints in the building envelope clearly does not meet the requirements of Standards 1.1 and 1.2.</p> <p>Absence of or inadequate detailing of movement joints in complex cladding systems or on multi-storey buildings.</p>	<p>Absence of or inadequate detailing of movement joints on low rise buildings which do not have complex cladding systems.</p>

6 Design (Secondary Structure)

Frequently items of secondary structure are designed by members of the design team other than the principal structural designer. Details may only appear on architectural drawings. These items can be structurally important and must be included in the scope of structural design certification.

Key Factors

Certifiers are responsible for ensuring that the designer has considered the design of secondary structure and that the design has been adequately checked.

Reference	Performance Criteria	Major Non-conformances	Improvement Issues
B6.1	Internal Partitions and Ceilings Certifiers shall satisfy themselves that adequate details of internal partitions, ceilings and their supports have been prepared and where appropriate that there are sufficient calculations or other evidence to demonstrate their adequacy.	The design of any internal partitions or ceilings clearly does not meet the requirements of Standard 1.1. Absence of or grossly inadequate calculations or other justification demonstrating the adequacy of internal partitions, ceilings and their fixings. Absence of or grossly inadequate details for internal partitions, ceilings and their fixings.	Inadequate calculations demonstrating the ability of internal partitions, ceilings and their fixings. Inadequate details for internal partitions, ceilings and their fixings.

Reference	Performance Criteria	Major Non-conformances	Improvement Issues
<p>B6.2</p>	<p>Protective Barriers</p> <p>Certifier shall satisfy themselves that adequate details of any pedestrian or vehicle barriers have been prepared and that there are sufficient calculations to demonstrate their design.</p>	<p>The design of any protective barriers clearly does not meet the requirements of Standard 1.1.</p> <p>Absence of or grossly inadequate details of the protective barriers and their fixings.</p> <p>Absence of or grossly inadequate calculations or other justification demonstrating the ability of the protective barriers and their fixings to support the required loads.</p> <p>Absence of or grossly inadequate consideration of the ability of the supporting structure to withstand the loads from the barrier.</p> <p>Absence of or grossly inadequate performance specification and details on the warrant plans, where the barriers were included on Schedule 1.</p> <p>Absence of calculations, etc. to justify the preliminary design shown on the warrant plans where the barriers were included on Schedule 1.</p> <p>Absence of evidence demonstrating that the Certifier made adequate enquiry regarding the design of the barrier and its fixings and/or the experience of those undertaking the design where this was prepared by an external specialist/third party.</p>	<p>Inadequate details of the protective barriers and their fixings.</p> <p>Inadequate calculations or other justification demonstrating the ability of protective barriers and their fixings to support the required loads.</p> <p>Inadequate consideration of the ability of the supporting structure to withstand the loads from the barrier.</p> <p>Inadequate performance specification and details on the warrant plans, where the barriers were included on Schedule 1.</p> <p>Inadequate or insufficient calculations, etc. to justify the preliminary design shown on the warrant plans where the barriers were included on Schedule 1.</p> <p>Insufficient evidence demonstrating that the Certifier made adequate enquiry regarding the design of the barrier and its fixings and/or the experience of those undertaking the design where this was prepared by an external specialist/third party.</p>

7 Specification

Section 11 of the Act deals with the certification of design. Sub-section (2) states ‘Design’ includes the specification of the material to be used. Regulation 8 sets the standard against which an adequate specification of material performance may be judged.

Key Factors

Materials fittings and components that are important to the structural performance of the building must be manufactured and have their performance tested in accordance with acceptable national or European standards. Testing must be carried out by suitably accredited testing organisations. Components and materials must be durable under the exposure conditions that they will encounter and when their performance depends on regular maintenance, inspection or replacement they must be sufficiently accessible for this work to be carried out.

Reference	Performance Criteria	Major Non-conformances	Improvement Issues
B7.1	<p>Structural Specification</p> <p>Certifiers must satisfy themselves that the structural materials and manufactured structural components have been adequately specified so that the performance assumed in the calculations is achieved and that the requirements of the Standards are delivered.</p>	<p>The specification of the structural materials and manufactured structural components clearly does not meet the requirements of Standards 1.1 and 1.2.</p> <p>Absence or grossly inadequate specification for the structural materials and components to be used in the project.</p> <p>Absence of evidence that the specification had been checked.</p> <p>Structural components specified on the basis of inadequate or inappropriate test certification.</p> <p>Structural components specified for a situation inappropriate to the conditions of the test.</p>	<p>Inadequate specification for the structural materials and components to be used in the project.</p> <p>Inadequate evidence that the specification had been checked.</p>

8. Structural Fire Protection

Standard 2.3 sets out the standard required by the Regulations for the structural performance of the building in a fire. This is outwith the scope of the SER Certification Scheme.

Key Factors

Required level of fire resistance and how this is achieved. Whether an 'engineered' approach to design has been adopted. Requirements for non-combustibility. Special requirements for portal framed buildings in boundary condition.

Reference	Performance Criteria	Major Non-conformances	Improvement Issues
B8.1	<p>Elements of Structure (Aas defined by Regulation 2)</p> <p>Certifiers shall satisfy themselves that there has been adequate enquiry regarding the provisions, including fire protection, specified to ensure adequate performance of the structure in a fire.</p>	<p>Absence of evidence to show that there has been adequate enquiry to establish the provisions required to ensure an adequate level of performance of the structure in a fire.</p>	<p>Insufficient evidence to show that there has been adequate enquiry to establish the provisions required to ensure an adequate level of performance of the structure in a fire.</p>
B8.2	<p>Single Storey Steel Portal Framed Buildings</p> <p>Certifiers shall satisfy themselves that there has been adequate enquiry regarding the ability of the structure to support the external wall and provide the fire separation required by the regulations.</p>	<p>Failure to make adequate enquiry as to whether a single storey steel portal framed building should be designed for a fire boundary condition.</p> <p>Failure to undertake design calculations and detailing in accordance with the Steel Construction Institute Publication: Single Storey Steel Framed Buildings in Fire Boundary Conditions where these are required.</p>	<p>Inadequate or insufficient consideration of the measures required to be implemented where there is a fire boundary condition.</p>

9. Requirements for Membership of the Scheme

Approved Certifiers will have made a number of declarations in their application demonstrating compliance with the criteria for membership of the scheme. The accuracy of these declarations will be checked by the audit.

Key Factors

Certifiers must operate within the limits of his/her declared competence using the experience of others to undertake specific checks where necessary. They must approach certification in a methodical manner, operating within the guidance of the scheme and maintain records of how decisions are made. Certifiers must be able to show that they understand the statutory responsibilities and obligations that arise from membership of the scheme and undertake Continuing Professional Development CPD relevant to the role of certification.

Reference	Performance Criteria	Major Non-conformances	Improvement Issues
B9.1	Operating Within the Limits of Declared Competence Certifiers shall not certify projects where the work, or a significant proportion of the work, falls outwith the limits of knowledge and experience declared in the application for membership of the scheme, unless it can be demonstrated that the necessary knowledge and experience has been acquired since making the application.	Project certified well outwith the scope of competence declared in the application, where there is no evidence to demonstrate that the necessary knowledge and experience has been acquired since making the application.	Specific aspects, or components, of the project outwith the Certifier's competence and no, or inadequate, reference to an acknowledged specialist or expert competent in the design of the elements in question, where there is no evidence to demonstrate that the necessary knowledge and experience has been acquired since making the application.