



Certification Practice Note 3

Guidance on the certification of the structural design of roofs constructed using prefabricated timber trussed rafters

1.0. Background

- 1.1. Timber trussed rafters are frequently used to provide a structural framework to support the roof, ceiling or floors of buildings of all types, but predominantly in the domestic housing market where the buildings are primarily of timber-framed or loadbearing masonry construction.
- 1.2. The Building (Scotland) Regulations 2004 require in Mandatory Standard 1.1 that the building is designed so that the loadings that are liable to act on it will not lead to:
 - a) the collapse of the whole or part of the building
 - b) deformations which would make the building unfit for its intended use, unsafe, or cause damage to other parts of the building or to fittings or to installed equipment, or
 - c) impairment of the stability of any part of another building.
- 1.3. This document provides some guidance in relation to the certification of the structural design of roofs constructed using prefabricated timber trussed rafters.

2.0. General Guidance

- 2.1. Timber trussed rafters, commonly known as roof trusses, are prefabricated timber components which can be used to create both simple and complex roofscapes.
- 2.2. The responsibilities of the Certifier with respect to the certification of the design of a roof which is constructed using timber trussed rafters will be no different than for any other element of the building, in that the Certifier must be satisfied that the design has been appropriately checked and that it will meet the requirements of Mandatory Standards 1.1 and 1.2. This may be achieved by reviewing structural calculations or other justification for the design.

- 2.3. The Certifier must also see that any drawings that are submitted for building warrant are sufficiently detailed and include the information described in Annex A to Procedural Guidance on Certification published by Scottish Government:
- a) Plan showing the truss layout
 - b) Truss profiles
 - c) Design loading on rafters and ceiling ties
 - d) Position of and loading from any water tanks
 - e) Support and tying down details
 - f) Plan of roof showing any bracing required for the stability of the building
 - g) Location/centres of tying down details
 - h) Details of gable ladders and any other overhangs or special features
 - i) Requirements for any additional studs to accommodate high local loads from girder trusses, water tanks etc.
- 2.4. Roof trusses are usually designed by the supplier, who is often not appointed until after the warrant is granted.
- 2.5. In most cases, therefore, it is unlikely that the design of the roof trusses will be available for the Certifier to review at the time of the initial warrant submission. In which case, the applicant will need to decide whether to delay the initial submission or to make the submission in stages. Where appropriate on projects in Risk Groups RG1A and RG1B, use may be made of the third party designed details option. See guidance in Section 3.0 below.
- 2.6. As noted in other guidance, the Certifier is required under the legislation to keep records of how compliance with the building regulations was established.

3.0. Use of Schedule 1

- 3.1. Where appropriate on projects in Risk Groups RG1A and RG1B, use may be made of the third party designed details option. See guidance on Certification Performance Criteria B1.4.
- 3.2. It should be noted that this procedure may only be used for the certification of the design of the roof trusses themselves and any gable ladders, but NOT for the design of ancillary items, such as:
- a) Any bracing that is required to provide stability to the building
 - b) Any additional studs that are required under the supports for girder trusses etc
 - c) Tie down requirements
 - d) Restraint straps required for the stability of other elements such as masonry gable walls
 - e) Any loose timbers, such as those required to frame up openings in the roof, dormers, etc
- 3.3. The Certifier must see that the warrant submission includes an appropriately detailed performance specification for the roof trusses and that the warrant drawings show a conceptual roof truss layout, with truss profiles.

4.0. Form Q

- 4.1. Where roof trusses are included on Schedule 1 to the certificate of design, a Form Q signed by the Certifier will need to be submitted with the Completion Certificate, to confirm the design of the roof trusses has been finalised and is in accordance with the performance specification.
- 4.2. The Certifier will need to review the finalised design information for the roof trusses for compliance with the performance specification.
- 4.3. If the Certifier agrees that compliance with the performance specification has been demonstrated then the Certifier can sign Form Q and once signed by the Approved Body it can be submitted to the applicant, their agent or to the Verifier as appropriate.
- 4.4. If the design does not comply with the performance specification, then the Approved Certifier should not sign the Form Q.
- 4.5. It is not unusual for the roof truss supplier to depart from the conceptual design shown on the warrant drawings. In such cases the Certifier may determine that the design satisfies the requirements of the building regulations; however, because the design does not meet the performance specification in every respect the Approved Certifier should advise the applicant or their agent that an application for amendment to the Building Warrant is likely to be required by the Verifier to cover the departure from the approved design.

5.0. Certification Performance Criteria

- 5.1. Certifiers should also refer to the Certification Performance Criteria, which can be found on the SER website.

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