

Roof Cassettes Systems (Prefabricated Roof Panel Systems)

(August 2023) (First issue)

Applicable sites

Warranty and Building Control sites registered with NHBC

Applicable regions

This Technical Guidance Note applies to England, Wales, Scotland and Northern Ireland

Background and NHBC Standards

The use of roof cassette systems has increased in the UK over recent years. Many of the systems currently in use consist of prefabricated closed panels, and as a result site inspection of critical components and junction details is difficult. To gather information on the roof cassette systems currently in use, NHBC carried out extensive site surveys in 2022.

For the purpose of this Technical Guidance Note, roof cassette systems are defined as:

- Building systems consisting of prefabricated pitched roof panels which may also be supplied with prefabricated wall and floor panels, beams and other supporting elements of structure.
- Roof, wall and floor panels may be either open or closed panel.
- Roof cassette systems may be constructed from timber, metal or structural insulated panels (SIP) or any combination of these materials.

The purpose of this technical guidance note is to set out NHBC's requirements on roof cassette systems.

Key Technical Considerations

Roof cassette systems provide functions critical to the performance of a building including; structure, fire resistance, weatherproofing, durability, thermal and sound insulation, and may interface with heating appliances and flues.

The findings of the site survey highlighted that the construction details being used in many of these roof cassette systems did not follow NHBC Standards, standard industry practice and the guidance contained within the relevant Building Regulation supporting documents.

To demonstrate that roof cassette systems meet NHBC Technical Requirements R1 to R5, all systems should hold satisfactory assessment by an independent technical approvals authority accepted by NHBC.

Transition Arrangements

NHBC propose the following phased transitional arrangements:

Phase 1: Contractual

In order to permit the continued use of roof cassette systems, manufacturers must have entered into a contract with an appropriate independent technical approvals authority and a statement of intent by the independent technical approvals authority should be provided to NHBC by 31st December 2023. Where manufacturers do not wish to engage in this process, roof cassettes from these manufacturers will continue to be assessed on a project-specific basis until the 31st March 2024, after which they will no longer be acceptable.

The statement of intent must include the following information:

- That a technical assessment of the complete roof cassette system is to be undertaken, assessment of panels alone will not be accepted.
- As a minimum, the scope of the assessment should include:
 - Inspection and surveillance of factory production
 - Strength and stability
 - Fire resistance including details of critical junctions between elements

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- Reaction to fire classification
- Thermal performance
- Condensation risk
- Durability
- Resistance to weathering in use and during construction
- Regulatory compliance
- Installation guidance including acceptable superstructure tolerances
- Maintenance and reparability
- Approval of installers

Phase 2: Approval

Manufacturers should have a satisfactory assessment in place from an independent technical approval's authority acceptable to NHBC by the 31st December 2024.

Phase 3: Period of grace

After the 31st December 2024, where roof cassette systems have not completed the technical assessment process, they will continue to be accepted where clarification of the assessment stage is provided by the technical approvals body; All roof cassette systems used on NHBC registered developments after the 1st July 2025 should hold a satisfactory assessment from an independent technical approval's authority accepted by NHBC.