

Introduction

This section provides guidance on meeting the performance requirements for panelised roof cassettes.

For the purposes of our Warranty, panelised roof cassettes are prefabricated pitched roof panels (open or closed) which may also be supplied with wall and floor panels, beams and other supporting elements of structure. The systems may be constructed from timber, metal or structural insulated panels (SIP) or a combination of these. They can provide a completely clear roof space free from struts ties or bracing.

For Warranty purposes, cross laminated timber is not an acceptable material for panelised roof cassettes.

11.2.1 Compliance

The design, specification and erection of panelised roof cassettes shall meet the performance requirements of this section.

11.2.2 Information to be provided

The Designer shall provide sufficient design details to demonstrate it meets the requirements of this section.

A full set of design drawings and specifications should be made available to the Warranty provider and all other interested parties prior to the associated works starting on site. This may include:

1. A complete site specific design package satisfying all of the guidance within this section.
2. Evidence the installers have been trained and approved by the manufacturer to install the specified panelised roof cassette system.

The Warranty surveyor, at their discretion, may also request supporting information that demonstrates suitability for use of any materials or systems contained within the above.

11.2.3 Third party product conformity certificate

Panelised roof cassettes shall hold an appropriate third party product conformity certificate which is acceptable to us.

The roof cassette system must hold a full third party product conformity certificate from an independent approval body which is accepted by us. This could either be a UKAS, European equivalent product conformity accredited organisation or other body accepted by us, which looks at the system as a whole and reports on its suitability and scope of accepted use.

For systems which have not yet completed the process of obtaining the full third party product conformity certificate, a transitional arrangement deadline is set for the 1st of July 2026. This transitional deadline date, is only applicable to manufacturers that already have a contract engagement in place with a UKAS or European 'Product conformity' Technical approval body which are eligible to this transition arrangement.

Please refer to 'Appendix C – Suitability of Products and Systems' for further guidance on third party product conformity certificates.

11.2.4 Site specific design package

All panelised roof cassettes shall be supported with a site specific design package (per plot). An Engineer shall take overall design responsibility of the roof cassette systems and take account of interactions between the roof cassettes and the main house structure.

The site specific design package should include:

1. A full description and specification of the system and how this system complies with all current regulations and design codes, along with copies of calculations, drawings, reports, testing, etc.
2. Structural calculations and drawings should be carried out in accordance with the current European/British Standards and refer to the worst case scenario where the system could be used.
3. The Engineer must take account in the design of all structural components of the building, and elements that interact with the roof cassette to ensure they are all compatible. The calculation package must fully reflect the construction type and build-ups of the final structure of the house and roof including roof covering and any additional attachments (such as PV panels).
4. Principle connection details (drawing and calculations) must be provided for the floor and roof panel at the external wall, ridge connections, ceiling strut connections, and floor and roof connections. The calculations must cover all connection details and details of the roof load transfer.
5. There must also be a house type specific fixing schedule document available to allow the Warranty surveyor to check that the fixing specification has been followed on site. A generic fixing specification is not acceptable. It should also not be left to a third party to provide a fixing specification, this should be part of the holistic structural package from the Engineer.

6. The structural calculation package will need to include wind uplift calculations to ensure that the roof will be connected by restraint straps to the wall plates and gable/hipped ends accordingly. A gable restraint system will need to part of the design calculation package to consider the continuous or raised gable wall plate depending on the gable panel (i.e. masonry or timber frame or panels).
7. The whole design package must consider how all other elements will interact with the roofing cassette, such as insertion of false prefabricated chimneys, roof light penetrations or dormers, roof covering, Solar photovoltaic installations and ventilation systems.
8. The design package will also need to consider the prevention of fire spread, thermal insulation requirements, durability, weatherproofing, vapour permeability and sound insulation requirements (where applicable). The designer must consider critical elements especially at party walls and gable ends for fire resistance where Building Regulations may have different requirements than a traditional roof due to the differing loadbearing elements.
9. As part of the design there must be details on how the roofing cassettes will be finished at eaves and verge. Due to the varying nature of the roofing cassettes this could be done in different ways. Such as site attached constructed gable ladder or pre-installed gable ladder to roofing cassettes. Some have extended rafters to be cut on site and some have additional add on sections to extend the eaves. This must be in the design and not left as an ad-hoc solution to be constructed on site.
10. Roof cassette manufacturers must have a system operating procedure manual covering repairability and installation and sign off processes. All installers of the roof cassette system should receive suitable training from the manufacturer evidence of which must be provided to the Warranty surveyor upon request.

11.2.5 Site storage and temporary protection

Where delays are anticipated, there should be a site storage plan in line with the manufacturer's recommendations to ensure roof cassettes are not damaged and the moisture content does not impede on the performance or durability of the panels.

As panels are closed, storage on site with no protection is not acceptable.

Due to the closed panel nature of the roofing cassettes, storage on site shall be minimised and delivery of roof cassettes and lifting equipment/ installation shall be co-ordinated to prevent prolonged storage periods on site.

Where a breather membrane is proposed as a temporary weather protection details of maximum exposure of the membrane should be provided.

11.2.6 Installation

All installers of the roof cassette system shall receive suitable training from the manufacturer, evidence of which should be provided to the Warranty surveyor upon request.

Fillet pieces

Where additional fillet pieces are required at junctions (at wall plate and ridge level for example), they should be design and specified by the manufacturer prior to the roof cassettes being installed. Ad-hoc on site installations not designed or specified by the manufacturer will not be acceptable for Warranty purposes.

Service penetrations

Service penetrations through the roof cassette should not be through structural members. Where large service penetrations are required, they must be accommodated for in the design.