

Pride in  
the Job  
Awards



# Best practice guide

Section 3

# Superstructure

NHBC

# Best practice guide

**Our series of Best Practice Guides take you through what the Pride in the Job judges look for at each stage of construction and when considering the site manager's overall organisation and management skills.**

The Pride in the Job marking sheet used by our judges has 43 marking lines split across 10 sections. The judges will give a score for each line – where there is no work to mark, that line will be left blank and no mark given. A mark of four indicates compliance with NHBC Standards. A mark of five indicates extra attention to detail over and above compliance standards. A mark of six would indicate that much of what the judges have seen cannot be improved upon. A mark less than four would indicate varying issues relating to workmanship and non-compliance with NHBC's Standards – the greater the issue or number of the same issue, the lower the mark. The final score will be all the marks awarded expressed as a percentage.

These Guides set out what the judges are looking for with clear hints and tips on the sort of practice that will lead to higher marks.

Clearly it is impossible in these short guides to cover every single point of construction – we try here to cover the main issues that are taken into account when considering a mark for each score line.

When looking at the photographs, consider each one in the context of the score line heading – don't be distracted by something else that isn't as good – that will be marked accordingly elsewhere.

## Section 3 Superstructure

This is one of the larger sections of the Pride in the Job marking sheet and covers all aspects of the superstructure build above ground.

Structure, brickwork, blockwork, timber frame, weatherproofing and aesthetic finish are all considered here.

**Structural frame and/or load-bearing walls**

**External envelope (inc. chimneys and flues)**

**Cavities, insulation and soundproofing**

**DPCs and trays**

**Intermediate floor structure**

**Lintels, beams and other structural elements**

**Balconies including fixings and weatherproofing**

**Fire stopping (superstructure)**

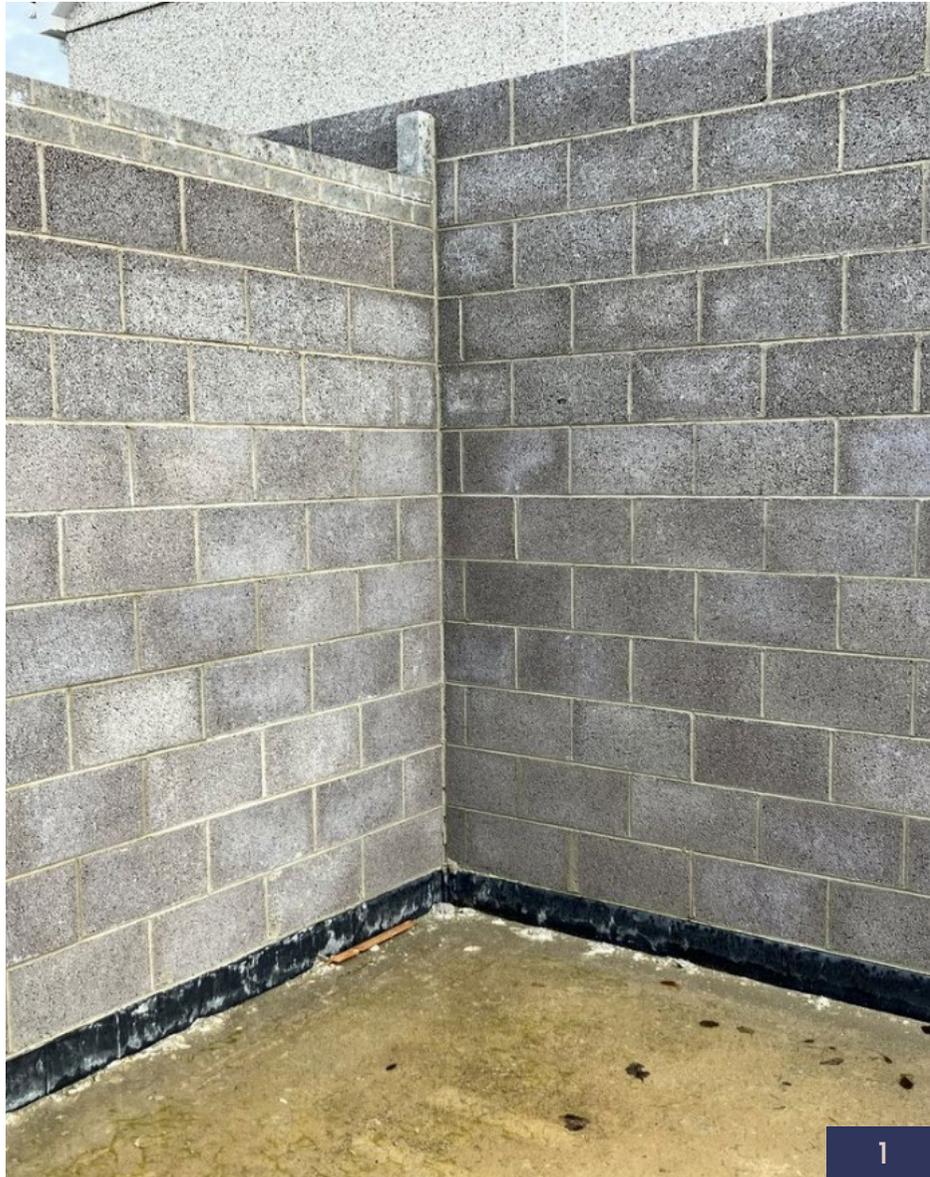
## Section 3

# Structural frame and load-bearing walls

The jointing and cutting of blockwork or timber frame, the forming of openings or features, the building in and around floor joists or beam support positions, and the blocking in between, are all considered under this heading. Separating walls should receive particular attention to avoid sound transmittance. In timber frame construction (where special fixing methods may be employed), the position of the wall studs and the fixing of the panels should all be taken into account.

Construction of masonry within height limitations of the product during build is important. In framed structures, all bolts should be of the correct grade, tightened with a torque wrench and the correct length to ensure the thread is visible beyond the head of the nut. Site cutting is generally avoided but, where necessary, should be to the frame designer's specification. All base plates should be fully grouted up after the holding down bolts are completely tightened. Packs or shims must be of similar grade steel. In concrete frames, the reinforcement is generally increased at the beam and column connection, and the concrete must be fully vibrated for in-situ construction. Reinforcement laps and general placement must be in strict accordance with the design. Piers and posts must be in designer-specified locations. Precautions against disproportionate collapse – whatever the system of build – must be correctly installed.

**Pride** – Accuracy of work in general and an understanding of the structural principles by the site manager may gain marks. In framed construction, the design and application of effective checking systems for connections demonstrates a particular appreciation of the challenges involved. Neatness of the build process should be considered.





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## Section 3

# External envelope

(inc. chimneys and flues)

The quality of the workmanship is the main issue, which, for brickwork, should include bonding, gauge, well-filled joints to prevent excessive water penetration etc. The visual impact of the construction is important. The bricklayer's attention to detail and any features (such as arches) should complement the construction.

Correctly positioned and formed movement joints, including sealant, should also be marked under this heading. External lintels and shelf angles, including their protection and fixings, should be considered as part of the external fabric. Prefabricated feature panels within cladding systems and their fixings should also be considered. The installation of cladding should precisely follow manufacturer's instructions and the requirements of BBA Certification.

**Pride** – Maintaining vertical perpendicular joints on masonry, accuracy of work in general, and quality of joints and bonding. Care of work in progress to avoid the necessity for excess cleansing and potential damage to facework. Correct application and thought applied to structural joints. Quality execution of setting out and jointing (particularly at interfaces and lintels, windows and in floor structures). Early anticipation of architectural problems indicates a heightened level of skill, even where most of the work is being carried out by specialists. The visual impact of the construction can also enhance the score.







## Section 3

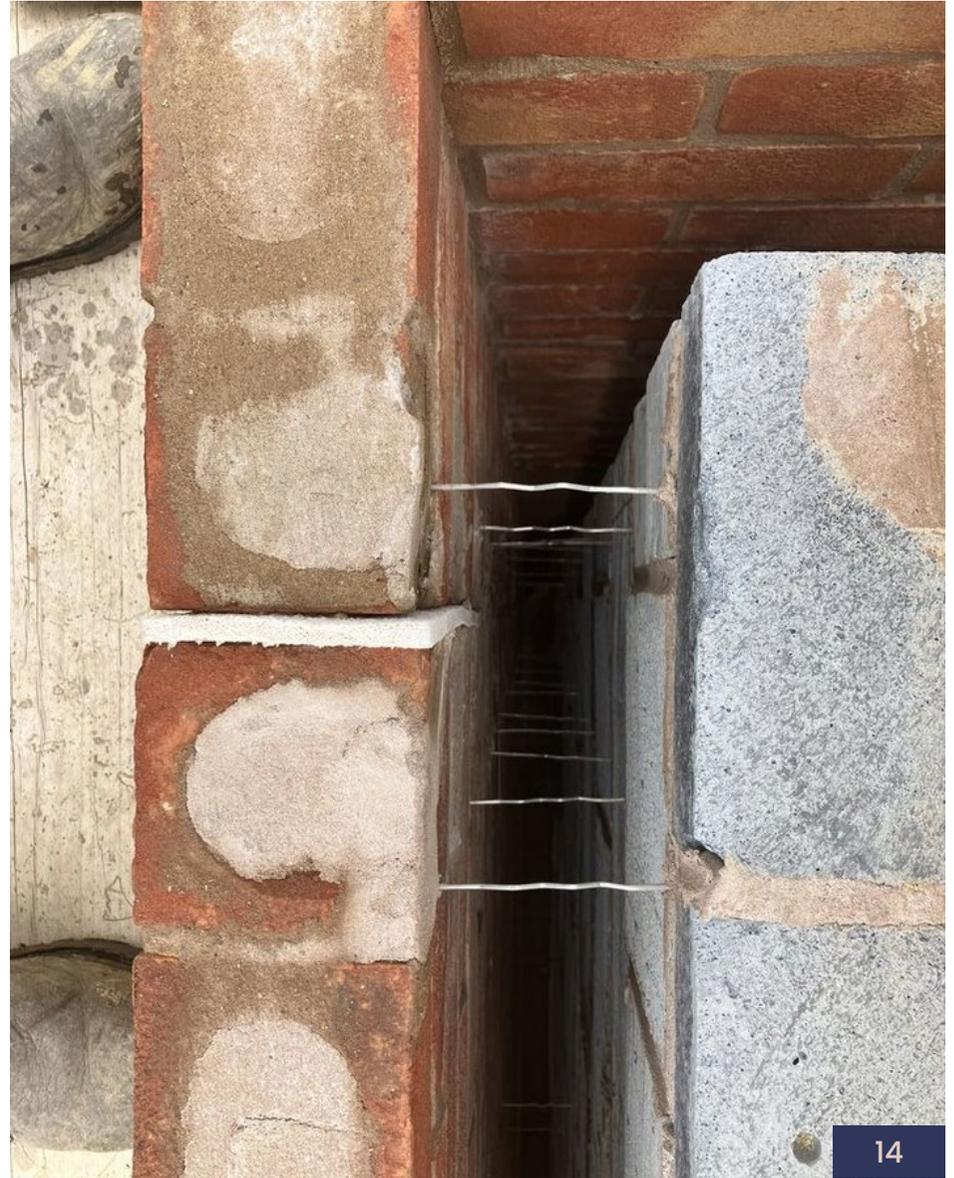
# Cavities and insulation

Cavity wall tie positions, type, number, spacing and cleanliness are important for stability and the prevention of water penetration. The insulation should be of the correct type and thickness for the location of the building. It should be properly restrained and continuous to prevent cold spots. No cases of cold bridging through the external wall construction should be observed. There should be no mortar droppings between full fill cavity insulation pieces. Cavities should attain, and keep consistent, the minimum specified width. Vented cavities to cladding systems should be constructed according to the manufacturer's design.

**Pride** – High standard of detailing, accuracy, alignment and particular cleanliness of wall ties, DPC trays and weep vents. Insulation should be noticeably clear of debris through the use of protective measures during subsequent wall construction.



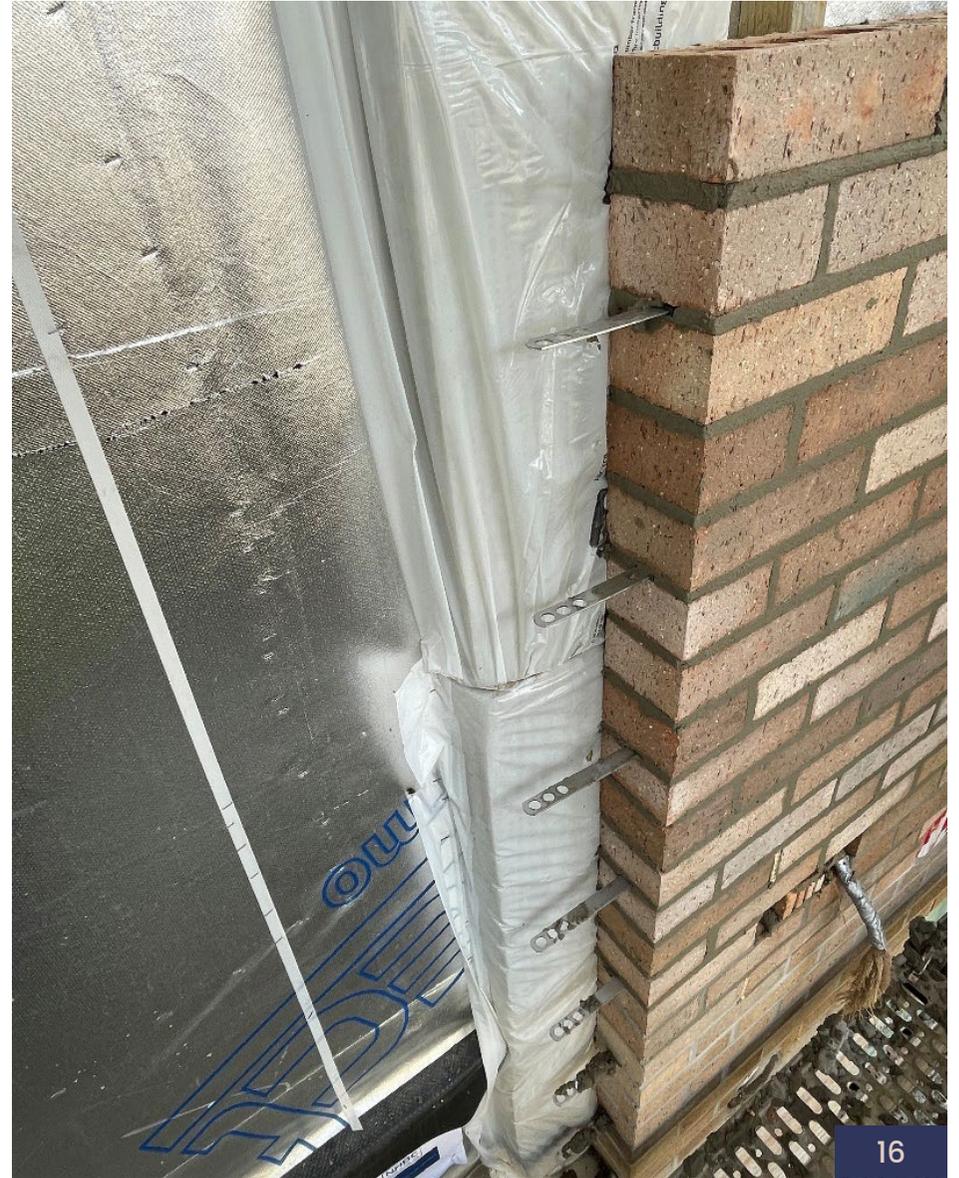
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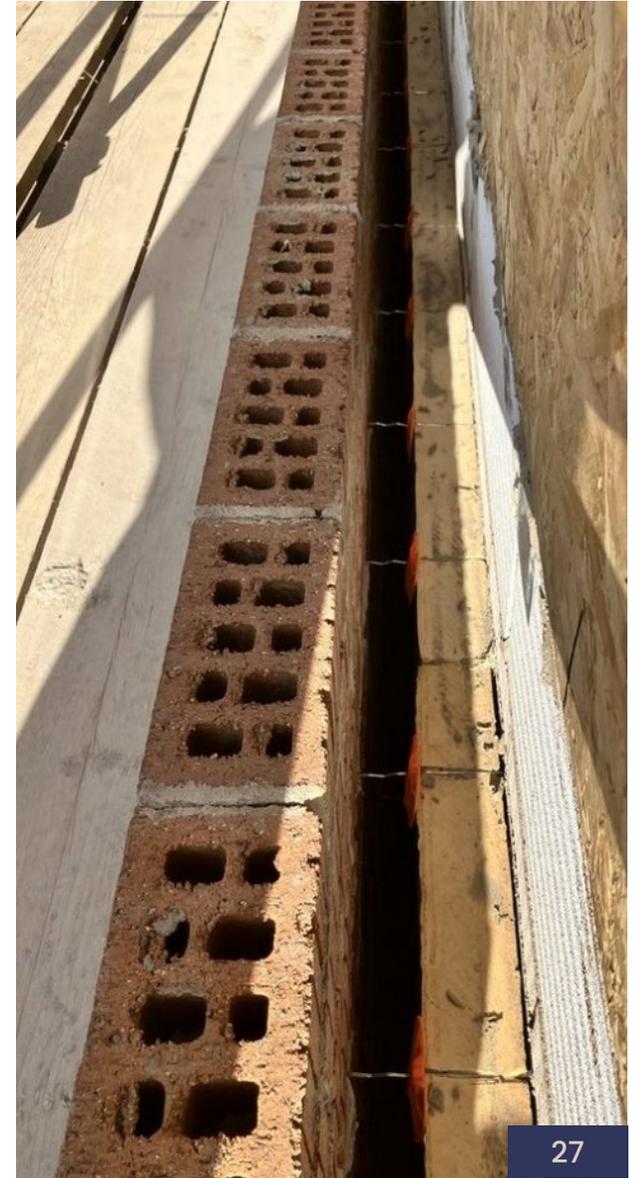
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# DPCs and trays

DPC trays should be installed at correct levels with stops ends and correctly positioned weep holes. Vertical DPCs should be tucked into the inner leaf bed joint below the lintel and extend below the sill into the cavity. Stepped trays are to be carefully set out using profiles.

**Pride** – High standard of detailing, accuracy, alignment and particular cleanliness of DPC trays and weep vents. Correct and consistent location and spacing of weep holes, with clean openings and neat pointing around them, may gain extra marks.



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## Section 3

# Intermediate floor structure

This refers to the structural floor, whether timber, steel or pre-cast or in-situ concrete. All required straps, noggins and strutting should be fixed in position. Proprietary floors must be installed in accordance with the manufacturer's design. Correct wall interfaces must be used (hangers or building in of joists 3 and beams).

The quality of workmanship is vital for this element of construction, particularly separating walls, to avoid sound transmittance. Consideration must be given to any special fixing details to the main frame beams and columns. Precautions against disproportionate collapse – whatever the system of build – must be correctly installed.

**Pride** – Particularly well-formed and consistent, debris-free edge gaps to timber floor decks, neatly cut and filled details where joists bear onto load-bearing walls. Well-formed bearings for concrete floor members, taking into account any cambers or service cut outs. Well prepared structural surface to enable a good finish to be applied.







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## Section 3

# Lintels, beams and other structural elements

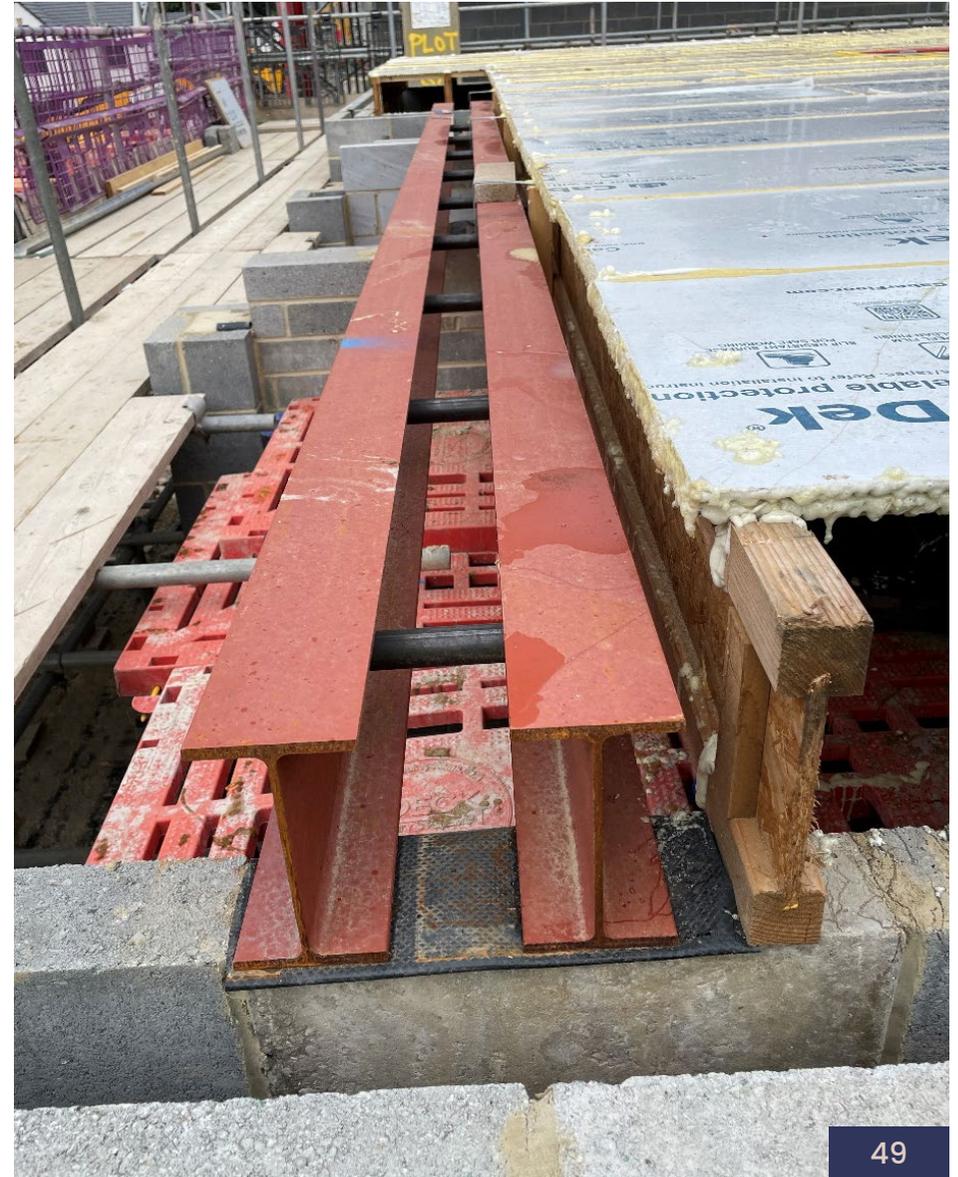
The correct length and bedding of lintel bearings are important to ensure full distribution of the load. Padstones should be of the required size and positioned centrally below the beam or lintel, unless otherwise designed.

In blockwork walls, full blocks should be used for lintel bearings with correctly bonded blocks below. Girder truss bearings are also considered under this heading. Mild steel beams should be protected to ensure durability in accordance with NHBC Standards 6.5.3.

**Pride** – Care in setting out, bedding components and jointing where required. Consistent avoidance of straight joints around bearings. Planning of coursing so that lintels over doorways are installed at an appropriate height without excessive gaps to door linings.





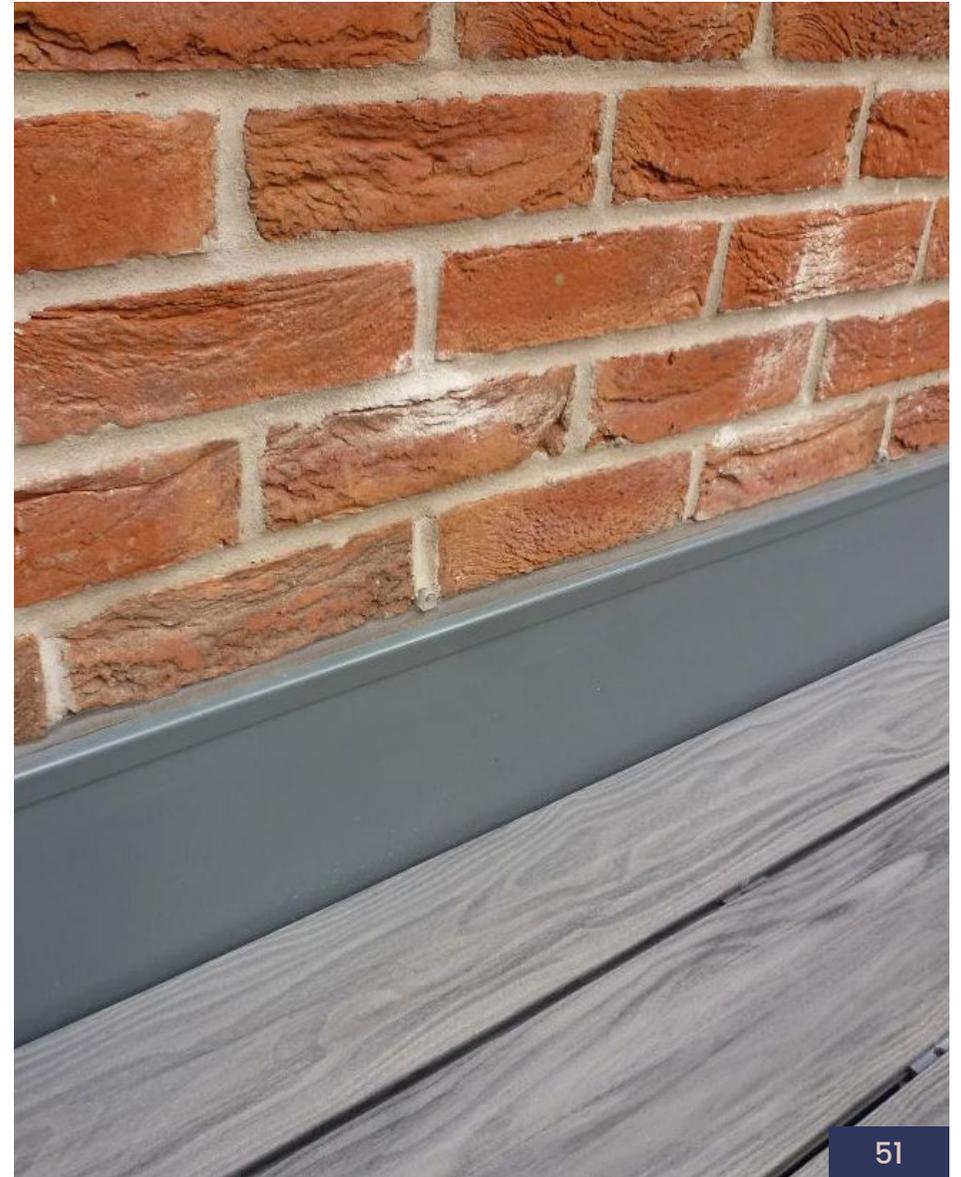
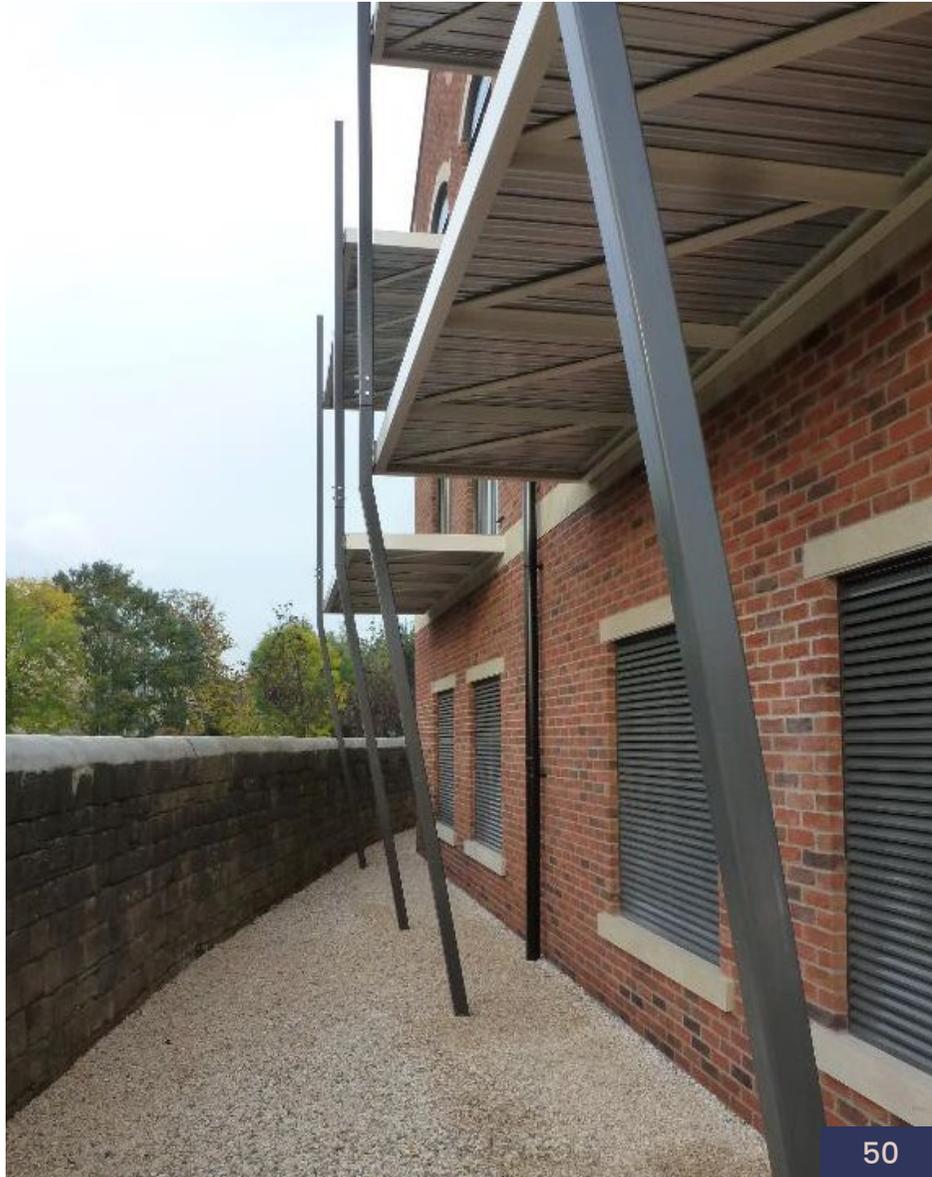


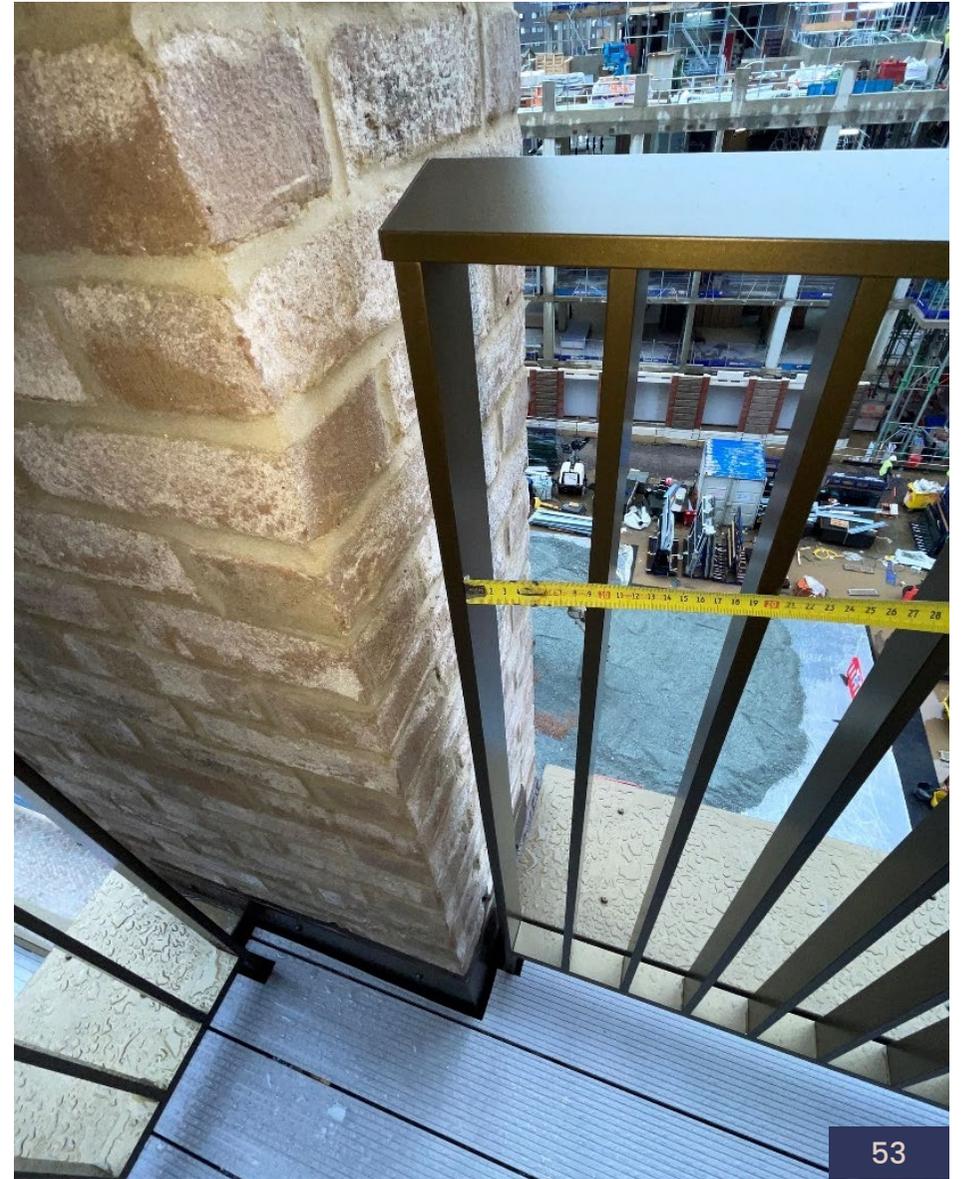
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# Balconies, including fixings and weatherproofing

**Balconies, including fixings and weatherproofing – balconies must be accurately aligned, installed and correctly fixed back to the main frame. Look for correct balcony guarding and gaps. Correct drainage for the balcony design is most important, and should match approved drawings and meet NHBC minimum requirements. Adequate sealing of fixings where they penetrate the weatherproof fabric is vital.**

**Pride** – Care taken to make these distinctive structures look aesthetically pleasing, whatever the design. Neat details around fixings to main superstructure elements. Careful consideration of the provision and maintenance of balcony drainage and overflow systems. Efforts made to create a pleasing appearance to soffits and decking.





## Section 3

# Fire stopping (superstructure)

**Fire stopping (superstructure) – the correct installation of fire-resisting materials to walls, ceilings and compartments are important to achieve their required performance standards.**

**Pride** – Care taken to ensure that products are installed accurately and precisely to meet their performance capabilities. A carefully designed checking and signing-off system implemented on site. Catalogued photographic records of fire stopping prior to covering up.





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# Good luck!

We hope you have found this best practice guide useful in gaining a better understanding of what the judges are looking for at each stage of construction.

Remember, the six characteristics the judges are looking for in a site manager are:

- consistency
- attention to detail
- technical expertise
- leadership
- interpretation
- health and safety.

We wish you all the very best in the Pride in the Job competition as you strive for your very first win or to repeat or even improve on your performance in previous years.

