Wall panelling *set-out*: rails, stiles and panel widths

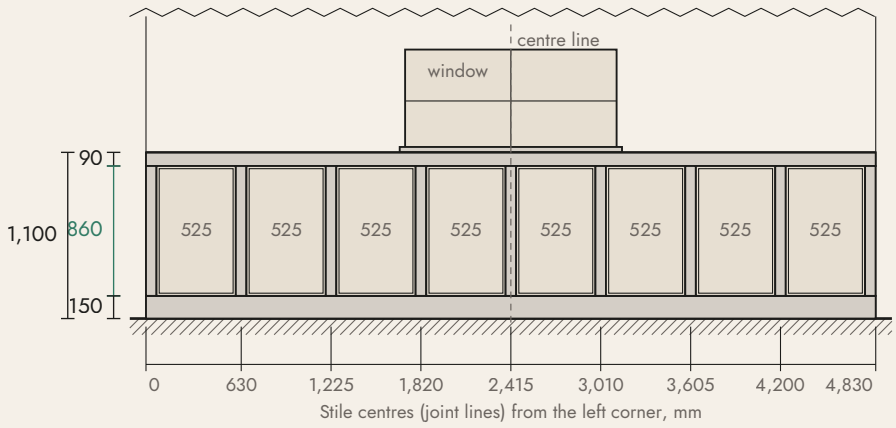
No standard fixes how a wall is divided into panels. Choose the heights, then the stile and rail widths, then a whole number of equal panels so every joint falls on a stile centre. This sheet gives the six steps, a worked example on a 4,830 mm wall and wording for a drawing note.

AT A GLANCE

Set-out element	Range or convention in circulation	How to settle it
Panelling height (dado or wainscot)	A fifth to a third of room height; 660 to 810 mm in one writer's range; 900 to 1,100 mm in modern guides	Pick a datum in the room (window stool, door head); dimension from the floor.
Stile and rail widths	Stiles 50 to 70 mm, top rail about 90 mm in one modern guide; bottom rail often deeper	One stile width for the wall. Decide the bottom rail first.
Panel proportion (height : width)	Square, 3 : 2, about 1.6 : 1 or taller; no authoritative ratio	Try each panel count and read the proportion it gives.
Panel widths and joints	Equal along a wall (within 1 mm is workable); joints on stile centres	Whole number of equal panels; dimension stile centres.
Symmetry	About the wall centre, the window or the chimney breast	Even count: centre on a stile. Odd: on a panel.
Corners	End stile made wider, then scribed to the wall	Main wall runs through; the other butts to it.
Doors	A stile between last panel and architrave	Panels equal; that stile takes the remainder.
Windows	Panelling cap level with the window stool	Cap and stool on one line.

Millimetres unless stated. The ranges are conventions, not standards: we found no standard or primary source that fixes any of them.

WORKED EXAMPLE, TO SCALE



A 4,830 mm wall in eight equal panels. Our worked example; the values are not a recommendation.

THE SIX STEPS

- 1. Measure the clear length L and the ceiling height. 2. Fix the heights: H, then b and t, so h = H – b – t. 3. Choose the stiles: s, and a visible end stile e (made wider, then scribed).

· 4. Count: n = (L – 2e + s) ÷ (target + s), rounded. 5. Solve: p = (L – 2e – (n – 1) × s) ÷ n; round down and share any remainder between the end stiles. 6. List the stile centres and put joints on them.

THE SAME WALL, OTHER COUNTS

n	Panel width, mm	Height : width	Centre falls on
7	610	1.41 : 1	the middle of a panel
8	525	1.64 : 1	a stile centre
9	458.9	1.87 : 1	the middle of a panel

Panel height 860 mm, stiles 70 mm; counts of 6 and 10 are on the web page. An even count puts the wall centre on a stile, an odd count on a panel.

SPECIFICATION WORDING

SETTING OUT AND HEIGHT

Panelling [1,100] mm high to the top of the [dado rail / cap] from finished floor level, aligned with [the window stool / door head]. Set out symmetrically about [the wall centre line]; panel widths equal within [1] mm along each wall; joints on stile centres. Stiles [70] mm, visible end stiles [70] mm, top rail [90] mm, bottom rail [150] mm, panel height [860] mm, as set-out drawing [no.], approved before production.

CORNERS AND OPENINGS

End stiles made [10] mm wider than shown and scribed to the wall on [site / in the workshop]. At [internal corners] [wall B] runs through and [wall A] butts to it. At doors the stile beside the architrave takes up the remainder of the run and is not less than [70] mm; panel widths do not vary.

DRAWING GOVERNS

Where the wall does not divide into equal panels at the width specified, the count is set to the nearest whole number, the width adjusted and the revised set-out approved before production. A drawn dimension governs over any proportion rule.

TERMS USED

Rail and stile
The framing of a panel: stiles are the vertical members and rails the horizontal ones, with the panel set into grooves between them.

Scribe
To shape the edge of a panel or board so it follows an uneven wall, floor or ceiling; a scribe strip is a deliberately oversized piece cut to fit.

Set-out
The drawing, and the arithmetic behind it, that fixes where every panel, stile and joint goes on a wall before anything is cut.

Stile centre
The centre line of a stile between two panels. Joints in rails and capping are placed on it so that the stile hides them.

STANDARDS AND SOURCES

· Gary Katz, Correct Height for Chair Rail and Wainscot, Journal of Light Construction, 31 July 2017: read 5 November 2026; source of the dado ranges, pedestal fractions and Swan figure as reported there (the pattern books were not read).
· Approved Document B Volumes 1 and 2 (England), 2019 edition with amendments to 2026: Volume 1 paragraph 4.3; Volume 2 paragraph 6.3 (what a wall does not include). Read November 2026.
· BS 1186-3, wood trim and its fixing: named only; not read. No set-out rule is claimed from it.

Full guide: https://makebespoke.com/trade/technical/wall-panelling-set-out. Make Bespoke Studio coordinates manufacture through its partner workshops. Figures are guidance only and your specification governs; some may be superseded, so contact the studio to verify.