WORKFLOW CASE STUDY

Internal Partitions Measured on One Sheet, Delivered on the Current Issue

948 m of internal walls and partitions plus 351 m of external blockwork, read off a colour-keyed partitions plan and transferred onto a construction issued drawing.

DRAWING TYPE	MEASUREMENT
Partitions GA + Partition Details	Gross, over openings

QStimating

CONTEXT & CHALLENGE

A building floor, fourteen wall types, and a legend that disagrees with itself

The building’s first floor is sixty bedrooms and en-suites wrapped around a courtyard, with corridors, day rooms and a dining room. Every internal wall had to be measured by type for the bill; an FR-60 compartment wall and a plain FR-30 partition are not the same item and cannot share a rate.

The types are identified by colour, not by geometry. Five of the six partition types are drawn at exactly the same width, so nothing in the line work separates them. Colour is the only thing carrying identity; and the legend that decodes it is wrong in two places.

The risk: the legend is not the authority

- PT_06 is swatched RGB (0.478, 0.000, 1.000) on the legend. Every one of its 56 fills is drawn (0.502, 0.000, 1.000).
- An exact match on that swatch returns nil for 136.25 m of partition; and a nil reads as a type that simply isn't on the floor.
- LT_02 shares its swatch with WT_02, putting 217.97 m of 245 mm blockwork one sort order away from being billed as wall lining.
- The partition details sheet settles both; it carries its own swatch beside every type detail, and it disagrees with the GA legend on each.

The scale: 313 fills, 312 runs, one floor

- Fourteen types on the legend, eleven of them present on this floor, in 313 separate bands of colour fill.
- 948.43 m of internal walls and partitions across ten types, plus 350.63 m of external blockwork; 1,299.06 m on the sheet, one floor, and not a building total.
- Five partition types plot at exactly 130.0 mm while the details sheet gives 135 / 105 / 103 / 105 / 105. Not one agrees.
- Three lining types sit on the legend and none of them appear anywhere on the floor; an absence worth stating, not omitting.

SOURCE DRAWING

25.017-22-XX-XXX-DR-HBM-AR-1001 — First Floor Partitions, Rev C.3

First Floor: 60 bedrooms and en-suites around a courtyard. Build-ups cross-referenced to AR-700 Rev P.1.

What the sheet carries

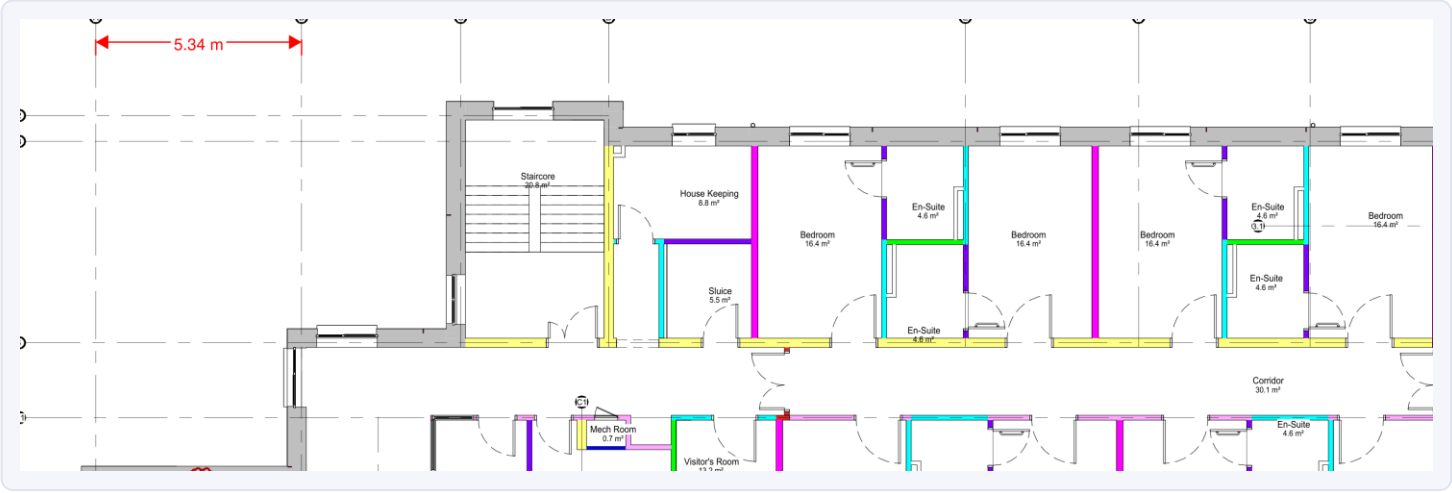
- 11,285 vector paths — raster coverage 0%
- 313 wall fills in 11 legend colours, one band per run
- Partition / Lining / Wall Type Legend — 14 entries with codes, descriptions and fire ratings
- The legend mixes the external 480 mm wall type in among the internal ones
- Grid A to L and 1 to 19, shared with the current floor plan AR-101
- No annotated dimension strings anywhere on the sheet
- P9 Construction issue, dated 2026.03.03

Scale — stated 1:100, and actually 1:100

35.2792 mm/pt, verified two ways that agree to 0.011%; three Bluebeam CHECK lines, and two legend nominals against their drawn fill widths. With no dimension strings on the sheet, the second source had to come from the legend itself.

METHODOLOGY

The colour is the type. The width is not the wall.



Every partition on this sheet is drawn as a single filled band at exactly 130.0 mm, whatever the detail says. The band identifies the type; it is not a section through it. Read it as a section and every partition thickness on the floor is wrong by up to 27 mm.

The test costs one call: if two or more types share a drawn thickness to the millimetre, the sheet was never modelled at build-up thickness. Take every thickness from the details sheet and use the fills for length only — the lengths remain exact.

01

Triage and calibrate

Confirm vector, not raster. Verify the scale from two independent sources; the Bluebeam CHECK lines, and legend nominals against drawn fill widths where no dimension strings exist.

02

Read the legend twice

Once off the GA, once off the partition details sheet. The details sheet carries its own swatch per type, and it settles both the mismatched colour and the duplicated one.

03

Enumerate every fill

Every colour inside the grid extent, no sampling. Drop background panels over 2 m thick, and flag any fill drawn at a real type's thickness but carrying no legend colour.

04

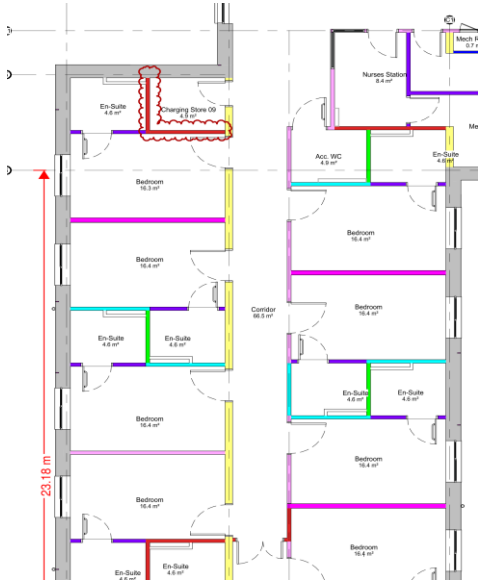
Sweep, transfer, verify

Sweep the stitch tolerance to prove the total is stable. Fit the grid onto the current issue drawing and redraw every run there as toggleable layers.

MEASURED HERE, DELIVERED THERE

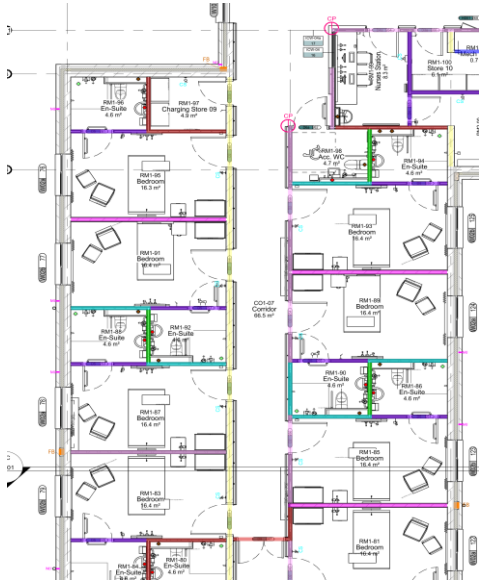
Measured on the partitions GA, drawn on the current construction issue

SOURCE — AR-1001 Rev C.3, Partitions GA



- Colour fills carry the type; 313 bands across 11 types, merged into 312 continuous runs.
- Issued 2026.03.03. It is the only sheet on the job that identifies wall type at all.
- Drawn thickness is uniform and carries no build-up; the run extent is the quantity.

DELIVERED — AR-101 Rev C.16, First Floor



- Every run redrawn on the current construction issue, four months newer than the source.
- One toggleable layer per type, each carrying its total and its AR-700 build-up in the layer name.
- Layers off renders pixel-identical to the original sheet; verified, not assumed.

1.000000

Grid scale ratio

Both axes, 31 shared labels

0.36 pt

Registration offset

Pure translation — 13 mm on the ground

27 of 31

Labels within 0.001 pt

The four outliers are grid extents, not fit error

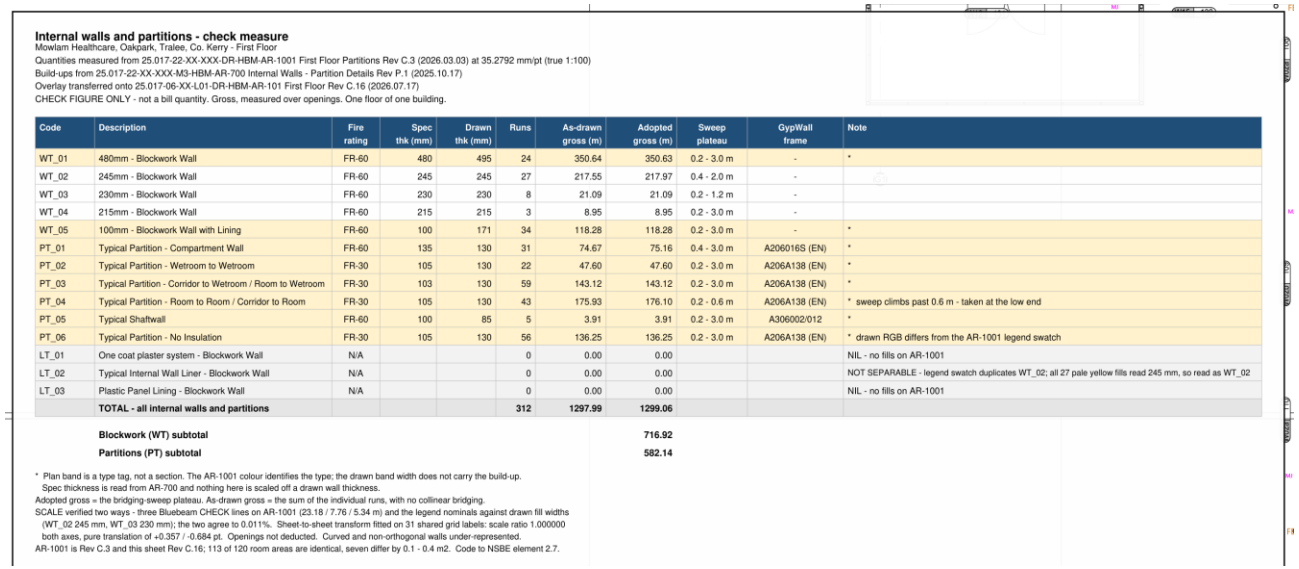
113 of 120

Room areas identical

Across a four-month revision gap

OUTPUT, QA & VALUE

Eleven named types, a layered overlay and a four-tab workbook



Internal walls and partitions - check measure
Mowlam Healthcare, Oakpark, Tralee, Co. Kerry - First Floor
Quantities measured from 25.017-22-XX-XXX-DR-HBM-AR-1001 First Floor Partitions Rev C.3 (2026.03.03) at 35.2792 mm/pt (true 1:100)
Build-ups from 25.017-22-XX-XXX-M3-HBM-AR-700 Internal Walls - Partition Details Rev P.1 (2025.10.17)
Overlay transferred onto 25.017-06-XX-L01-DR-HBM-AR-101 First Floor Rev C.16 (2026.07.17)
CHECK FIGURE ONLY - not a bill quantity. Gross, measured over openings. One floor of one building.

Code	Description	Fire rating	Spec thk (mm)	Drawn thk (mm)	Runs	As-drawn gross (m)	Adopted gross (m)	Sweep plateau	GypWall frame	Note
WT_01	480mm - Blockwork Wall	FR-60	480	495	24	350.64	350.63	0.2 - 3.0 m	-	*
WT_02	245mm - Blockwork Wall	FR-60	245	245	27	217.55	217.97	0.4 - 2.0 m	-	
WT_03	230mm - Blockwork Wall	FR-60	230	230	8	21.09	21.09	0.2 - 1.2 m	-	
WT_04	215mm - Blockwork Wall	FR-60	215	215	3	8.95	8.95	0.2 - 3.0 m	-	
WT_05	100mm - Blockwork Wall with Lining	FR-60	100	171	34	118.28	118.28	0.2 - 3.0 m	-	*
PT_01	Typical Partition - Compartment Wall	FR-60	135	130	31	74.67	75.16	0.4 - 3.0 m	A206016S (EN)	*
PT_02	Typical Partition - Wetroom to Wetroom	FR-30	105	130	22	47.60	47.60	0.2 - 3.0 m	A206A138 (EN)	*
PT_03	Typical Partition - Corridor to Wetroom / Room to Wetroom	FR-30	103	130	59	143.12	143.12	0.2 - 3.0 m	A206A138 (EN)	*
PT_04	Typical Partition - Room to Room / Corridor to Room	FR-30	105	130	43	175.93	176.10	0.2 - 0.6 m	A206A138 (EN)	* sweep climbs past 0.6 m - taken at the low end
PT_05	Typical Shaftwall	FR-60	100	85	5	3.91	3.91	0.2 - 3.0 m	A306002/012	*
PT_06	Typical Partition - No Insulation	FR-30	105	130	56	136.25	136.25	0.2 - 3.0 m	A206A138 (EN)	* drawn RGB differs from the AR-1001 legend swatch
LT_01	One coat plaster system - Blockwork Wall	N/A			0	0.00	0.00			NIL - no fills on AR-1001
LT_02	Typical Internal Wall Liner - Blockwork Wall	N/A			0	0.00	0.00			NOT SEPARABLE - legend swatch duplicates WT_02; all 27 pale yellow fills read 245 mm, so read as WT_02
LT_03	Plastic Panel Lining - Blockwork Wall	N/A			0	0.00	0.00			NIL - no fills on AR-1001
	TOTAL - all internal walls and partitions				**312**	**1297.99**	**1299.06**			
	Blockwork (WT) subtotal						**716.92**			
	Partitions (PT) subtotal						**582.14**			

* Plan band is a type tag, not a section. The AR-1001 colour identifies the type; the drawn band width does not carry the build-up. Spec thickness is read from AR-700 and nothing here is scaled off a drawn wall thickness.
Adopted gross = the bridging-sweep plateau. As-drawn gross = the sum of the individual runs, with no collinear bridging.
SCALE verified two ways - three Bluebeam CHECK lines on AR-1001 (23.18 / 7.76 / 5.34 m) and the legend nominals against drawn fill widths (WT_02 245 mm, WT_03 230 mm); the two agree to 0.011%. Sheet-to-sheet transform fitted on 31 shared grid labels: scale ratio 1.000000 both axes, pure translation of +0.357 / -0.684 pt. Openings not deducted. Curved and non-orthogonal walls under-represented.
AR-1001 is Rev C.3 and this sheet Rev C.16; 113 of 120 room areas are identical, seven differ by 0.1 - 0.4 m2. Code to NSBE element 2.7.

QUERIED

WT_01 plots 495 mm against a 480 mm legend nominal, and WT_05 171 mm against 100 mm

EXCLUDED

A full-building background panel in WT_01's exact colour: 59 phantom metres on the 350 m external blockwork line

FLAGGED

One 130 mm x 1.80 m partition drawn solid black, carrying no legend colour at all

WHAT IT DELIVERS

✓ **Type identity, not just thickness**

The FR-60 / FR-30 split that geometry alone cannot give you; and the 136 m of PT_06 that an exact colour match returns as nil.

✓ **Auditable on the drawing**

One toggleable layer per type with the total in the layer name. Layers off renders pixel-identical to the original.

✓ **No hidden judgement**

Stitch sweep published, both scale derivations stated, drawn-versus-specified thickness flagged on every row.

✓ **Delivered on the live sheet**

Measured on the partitions GA, transferred onto the current construction issue through a fitted grid transform.

Part of the QStimating suite — drawing-measurability-triage · drawing-triage-wall-takeoff · ifc-data-extraction

QStimating

AI-assisted quantity surveying & estimating workflows

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