TRACER TAKEOFFS

tracertakeoffs.com

User Guide — PDF takeoffs, made easy

Your first measurement — 2 minutes

1. **Create a job**
   and upload your PDF drawings
2. **Open a drawing**
   click its row in the job
3. **Set the scale**
   click the scale chip — measure a known length, or pick a ratio like 1:100
4. **Measure**
   click the / tool, then click where the length starts and where it ends — the value appears instantly
5. **Export**
   CSV for a spreadsheet, PDF for a marked-up drawing

The same idea works for everything: ▱ areas — click each corner, then press Enter (or click your last point again) to finish · ● counts — click each item to tally it · made a mistake? right-click for undo and delete, or Ctrl+Z.

Toolbar key — what every button does

⊿	**Scale chip**	Set or calibrate the sheet scale — always do this first. Shows +N SZ when the sheet has scale zones
Rev	**Rev chip**	Which issue of the drawing you're on. Click it to upload a new revision, rename one, or go back to, compare with or download an earlier one
SZ	**Scale zone**	Box a detail drawn at a different scale and give it its own scale (or press Z)
↖	**Select**	Click a measurement to select it; Ctrl+click (⌘ on Mac) adds more; hold Space to pan the drawing
/	**Linear**	Straight length — click the two end points
~	**Path**	Length that turns corners — click each point, Enter to finish
▱	**Area**	Polygon area — click each corner, Enter to close
▭	**Rectangle**	Area by two opposite corners
◯	**Circle**	Click the centre, then a point on the edge
●	**Count**	Click each item to tally it into one count
T	**Text note**	Click the sheet and type a note in your own words — a query, a reminder. Prints on the marked-up PDF (or press N)
≡	**Line thickness**	Four lines, thin to thick, with the width beside them. Sets the active group's width, or the selected measurement(s); apply it to the whole group or to everything (or press W)
⊹	**Snap**	Snap new points to existing ones for clean joins
Aa	**Labels**	Show or hide the value labels on the drawing

⇆	**Compare**	Lay an earlier revision under the current one: slider, red/blue overlay, clouds round the changes
↻	**Rotate**	Turn the sheet a quarter clockwise; everything measured on it turns with it
⌧	**Delete**	Remove the selected measurement (or press Del)
⇩	**CSV / PDF**	Export a spreadsheet, or a marked-up copy of the drawing
⇲	**Fullscreen**	Hide the browser bars for maximum drawing space
?	**Guides**	Open these guides in a new tab

Getting started

Set up a job and get your drawings in.

Create a job

A job holds everything for one tender or project — its drawings, takeoffs and totals.

1. Go to Jobs and click + New job.
2. Give it a name, and optionally a trade label (e.g. Civils) to find it later.
3. Choose metric or imperial — you can switch any time; it only changes how values display.
4. Click Create. You'll land in the empty job, ready for drawings.

Add drawings

Bulk-upload a whole set of PDFs at once — even large multi-page sheets.

1. Open the job and click Upload drawings, or drag-and-drop PDFs straight onto the page.
2. Each PDF becomes a drawing in the register, with its number shown in full.
3. Tracer highlights only the part of the drawing number that varies across the set, so the right sheet is easy to spot.

Open a drawing

Click any drawing to open it in the editor, where you measure.

1. In the job, click a drawing row (or tile) to open it.
2. Pan by holding Space and dragging, or with the middle mouse button. Zoom with the +/− in the toolbar.

Set the scale first

Every sheet needs a scale before its measurements mean anything.

⊿ Calibrate from a known length (most reliable)

Draw along something you know the real length of, and Tracer works out the scale.

1. Click the scale chip at the top of the editor.
2. Choose Measure it, then Start measuring.
3. Click two points on a known dimension — a scale bar, or a dimensioned wall.
4. Type its real length, choose This sheet or All sheets (multi-page PDFs start on This sheet), then Set scale.

⊿ Use a preset or custom ratio

If you trust the printed scale, pick a ratio directly.

1. Open the scale chip and choose Pick a ratio.
2. Tap a common scale — 1:5, 1:10, 1:20 or 1:25 for details, 1:50 to 1:2500 for plans and site layouts — or type your own, e.g. 1:75.
3. Choose This sheet or All sheets, then Set scale.

⊿ This sheet vs all sheets

Multi-page sets often mix scales — set them independently when they differ.

1. On a multi-page PDF the scale panel starts on This sheet, so scaling one page never changes the others by accident.
2. Use All sheets when every page shares the same scale.
3. Use This sheet when a page is drawn at a different scale, then set the others separately.
4. The page list (n/N ▾ in the toolbar) shows every sheet's status: ● 1:100 is scaled, ○ No scale still needs one, and +N zones shows how many scale zones it holds. Click a sheet to jump to it.
5. A detail drawn at a different scale from the rest of its sheet? Box it with a scale zone (next guide).

SZ Scale Zones — details drawn at a different scale

Box a detail drawn at another scale, like a 1:20 section on a 1:100 plan, and everything measured inside it uses that scale.

1. Sheets often carry details at other scales: a 1:20 section or a 1:5 joint on a 1:100 plan. Set the sheet scale as normal, then put a scale zone round each detail.
2. Click SZ next to the scale chip (or press Z), click two opposite corners around the detail, then set the zone's scale in the panel: tap a preset such as 1:20, type a ratio, or measure a known length inside the detail.
3. If the zone covers measurements you've already taken, Tracer tells you how many and the scale they'll change to, and asks before it changes them.
4. A measurement belongs to the zone its middle sits in, so a line or area that runs over the edge goes by where its centre is. Every measurement in the side panel (counts aside) carries a scale badge — purple “SZ 1:20” for a zone, plain “1:100” for the sheet — so you can see at a glance what's been scaled. A ⚠ on the badge means the shape crosses a zone edge, so check it. Counts aren't affected.
5. Want a different scale for one measurement? Hover (or click) its badge and pick Auto, any zone on the sheet, or the sheet scale; hovering a choice lights that zone up on the drawing. A hand-picked scale shows ⚲ on the badge, and Auto puts it back. Right-click the measurement on the drawing for the same list.
6. Zones can sit inside other zones (a 1:5 detail within a 1:20 section). The smallest zone round a measurement wins.
7. To change a zone's scale, switch to the Select tool and double-click its tag on the drawing (or right-click it and choose Set zone scale…), click Scale… beside it under Scale zones on this sheet, or choose Change SZ 1:20's scale… at the bottom of the badge menu of any measurement in that zone. Its quantities update straight away.
8. To delete a zone, select it with the Select tool (click its border or tag) and press Delete, or use ✕ in the list or Delete zone on the right-click menu. Zones can't be moved or resized yet, so delete and redraw instead.
9. The eye button beside Scale zones on this sheet hides zones to tidy the drawing. Hidden zones still scale their measurements; they just aren't drawn.
10. Visible zones print on the marked-up PDF as dashed purple boxes. Their “SZ 1:20” tags follow the Labels toggle.

Shortcuts: Z Scale zone · Del Delete zone

Measuring

The takeoff tools, and how each one behaves.

/ Lengths — Linear & Path

Linear for a single straight run; Path for a multi-point run that turns corners.

1. Linear: click the two end points of the run.
2. Path: click each point along the run; press Enter (or click the last point again) to finish.
3. Backspace undoes the last point while you're drawing.

Shortcuts: L Linear · P Path

▱ Areas — Area & Rectangle

Both give you the area (the CSV export adds the perimeter).

1. Area: click around the shape, then press Enter to close it.
2. Rectangle: click two opposite corners.

Shortcuts: A Area · R Rectangle

◯ Circles

For round elements — tanks, manholes, columns.

1. Click the centre, then a point on the edge. You get area and circumference.

Shortcuts: O Circle

● Counting items

One count item tallies many markers, with a running total.

1. Pick the Count tool and click each item — the running number shows as you go.
2. Press Enter or Esc to finish that count and start a new one.

Shortcuts: C Count

▱ Roof pitch — true quantities from a flat plan

Drawings show roofs flat from above; set a pitch and the plan value converts to the true sloped value.

1. Measure the roof plane as normal — an Area or Rectangle, or a Linear line running up the slope.
2. Click the measurement to select it (the ↖ tool or its row in the panel — works on measurements you took earlier too), then choose the pitch in the panel: common pitches like 30° or 35° are one click, or pick Custom… for anything else.
3. The value updates instantly everywhere — panel totals, CSV, BoQ links and the marked-up PDF — and shows the pitch beside it (e.g. “124.5 m² @ 35°”) so a checker can see it was applied.
4. Beside every pitched value Tracer also shows the figure you measured before the pitch was applied — “130.99 m² @ 35° · 107.3 m² measured” — in the panel, on the drawing and on the marked-up PDF, so the sum can be redone from the label.
5. Measure each roof plane separately and give it its own pitch. Ridge and eaves lines run level — leave those without one.

△ Taking off from elevations and sections

No roof plan? Gable ends and sections show the slope at true length; a side elevation only shows its height.

1. Measure the slope where a sheet shows it. On a gable end elevation or a section the sloping edge is drawn at its true length, so a plain Linear along it needs no pitch at all.
2. A side elevation shows a roof face flat-on: you can measure its height (ridge to eaves) and its length, but not the slope. To turn that height into the slope, set the pitch to 90° minus the roof pitch — a 30° roof becomes 60°, a 35° roof 55° (pick Custom… in the pitch list and type it). Tracer divides by cos 60°, which is ×2, exactly what a 30° slope is to its height. Name the measurement so the “@ 60°” label is understood.
3. Click that height from the underside of the ridge tiles, not their top, down to where the

slates meet the gutter. The ridge tile sits above the point where the two slopes meet, and at 30° every millimetre of height becomes two in the slope.
4. The same 90° minus pitch setting converts a roof face drawn on a side elevation (Area or Rectangle) to its true area. For a clearer trail, measure the eaves as a Linear and give it the slope length as its Height — Tracer reports eaves × slope as the face area, labelled "@ 4.98 m high".
5. Every pitched value shows the figure you measured beside it, e.g. "5.32 m @ 60° · 2.66 m measured". If a slope measured directly on a gable end disagrees with a converted height, trust the direct one.

▭ Depth, height & deductions

Turn plan measurements into volumes and wall areas, and subtract openings — straight from the panel.

1. Depth (concrete, excavation, screed): select an Area or Rectangle and type a depth — you get the volume (area × depth) with the plan area still shown beside it, e.g. "22.5 m³ @ 0.225 m deep · 100 m²". One measure, two quantities.
2. Height (brickwork, render, formwork): select a Linear or Path along a wall run and type a height — you get the wall face area (length × height), with the run length still shown beside it.
3. In the BoQ, a cell takes its type from the first measurement ticked into it (an empty cell takes the headline quantity — volume for a slab with a depth). Once a cell is collecting areas, ticking that same slab adds its plan area; once it is collecting volumes, it adds its volume — so one measurement can feed an area cell and a volume cell without measuring twice.
4. Deduct (openings, voids): tick Deduct on any measurement and its value counts NEGATIVE in group totals, CSV, BoQ cells and the marked-up PDF — the QS "ddt". Measure the opening as its own measurement in the same group.
5. Every converted value shows how it was made (e.g. "22.5 m³ @ 0.225 m deep"), and works on measurements you took earlier — just select and set.

⊹ Snap for clean joins

Lock the cursor to existing points for tidy, repeatable takeoffs.

1. Toggle Snap in the toolbar (or press S). New points snap to nearby vertices.
   Shortcuts: S Snap

T Text notes on the sheet

Write a note in your own words anywhere on the drawing — a query, a reminder — and print it on the marked-up PDF.

1. Click T in the toolbar (or press N), then click where the note goes and type. Enter finishes; Shift+Enter starts a new line; Esc finishes too.
2. Pick a colour and a size (9–24 pt) beside the box as you type. The box is always white, so you see the note as it will sit on the sheet.
3. With the Select tool, drag a note to move it, double-click it to edit, or press Del to remove it. Notes are listed in the panel, and saved with the drawing.
4. Notes print on the marked-up PDF in their colour and size, the right way up on a rotated sheet. They're not measurements: they never count in totals, CSV or the BoQ.
   Shortcuts: N Text note

Organising your takeoffs

Groups, names and visibility — keep big jobs under control.

Groups & running totals

Every measurement lands in the Active group, which keeps a live subtotal.

1. Set the Active group in the Measurements panel before you measure.
2. Subtotals (length, area, count) update as you go.
3. Need a new group? Use + Group ▾ → Blank group.

Rename a group or measurement

Give things meaningful names — a legend reference, a room, a location.

1. Double-click a group name, or a measurement's name in the panel, to rename it inline.
2. Press Enter to save, Escape to cancel.

Reuse groups across sheets

Don't retype the same group names on every drawing.

1. On a new drawing, click + Group ▾ → Copy from another sheet.
2. Tick the group titles you want to bring across.
3. They're added here empty (title + colour, no measurements) — take off fresh into them. Matching names still total together in the CSV.

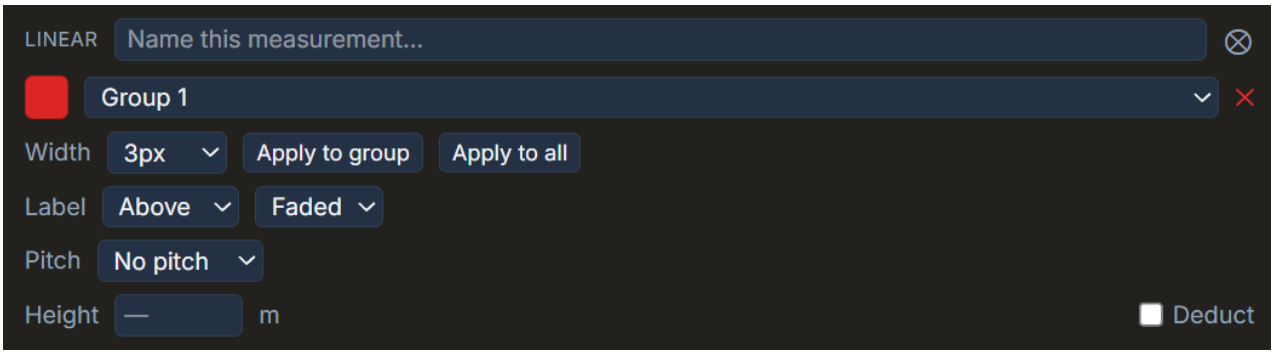
Colour, thickness, hatching & labels

Style groups and individual measurements, hatch areas, and control the on-drawing value labels.

1. Click a measurement in the panel to recolour it, change line thickness, or set its label position and background.
2. The ≡ Line thickness button in the toolbar (four lines, thin to thick, just after the drawing tools — or press W) shows and sets a width. With nothing selected it sets the active group — every line in it, drawn or new — and its Apply … to everything row sets the whole drawing. With one or more measurements selected it sets just those, and offers Apply to the whole group or to everything.
3. Set a line thickness for a whole group from its ⋮ menu — every line in the group takes it, on every page, including ones already drawn, and new lines drawn into the group start at it. The Apply … to everything row just below the chips sets the whole drawing.



4. Want thicker lines from the get go? Before you draw anything, click the ≡ Line thickness button (or open Group 1's ⋮ menu), pick a width, then click Apply … to everything. On a drawing with measurements, select a line or shape, pick a width on the Width row in the side panel and press Apply to all — the toolbar button and the right-click menu offer the same. The whole drawing takes it, every page, and drawings you haven't measured yet start at that thickness too, wherever you sign in. A line you set by hand afterwards keeps its own width.



5. Change several at once: hold Ctrl (⌘ on a Mac) and click measurements on the drawing or in the panel to add them to the selection. The panel then shows one strip for all of them — colour, hatch, width, labels, group and delete — and the ≡ Line thickness button and the right-click menu act on the lot. Names, pitch, height, depth and deduct stay per measurement.
6. Pick colours from the preset grid — the same grid everywhere makes it easy to reuse a colour from another drawing.
7. Hatch a group's areas, rectangles and circles from the pattern swatch beside its colour (or its ⋮ menu) — eight patterns: diagonal, reverse diagonal, cross, horizontal, vertical, grid, dots and brick. A single measurement can take its own pattern from its strip or the right-click menu.
8. Hatching prints on the marked-up PDF exactly as you see it on screen.
9. Use the Labels toggle to show or hide all value labels at once.

◉ Show & hide

Keep the drawing uncluttered and control what's exported.

1. Click the eye icon on any group or measurement to hide it — hidden items are left out of exports too.

Revisions — when the drawings change

Upload the new issue, keep your measurements, and see exactly what moved.

Rev Upload a new revision

A drawing holds its issues. The new file becomes current, the old one is kept, and your takeoff carries over untouched.

1. In the job, click Rev on the drawing's row — or, in the editor, click the Rev chip at the top and choose New revision…
2. Pick the PDF. The revision label is read from the file name where it carries one (…_revB, 80A, P02, 02!B!…), otherwise the next letter is suggested — change it to whatever the title block says. The first upload of a drawing gets its label the same way; click beside any label to rename it.
3. Click Upload. The new file is now the current drawing: every measurement, scale, Scale Zone and group is exactly where it was, so you check and adjust rather than start again. Sheets keep the way up they were shown, even if the new issue was plotted the other way

round.
4. If a sheet's size changed between issues (a re-plot at A3 of an A1 sheet) the toolbar tells you to check the scale before measuring.
5. The Rev chip lists every earlier issue. For each: Compare (next guide), Revert — make it the current drawing again, the newer one is kept too — and ⇩ to download its PDF. The last ten issues are kept per drawing.
6. In the job's register each drawing shows its revision and how many earlier issues it holds; once you've found changes, how many sheets changed and how many clouds are still to check.

⇆ Compare two revisions

Wipe between the issues with a slider, or lay them over each other: old in red, new in blue.

1. Click ⇆ Compare in the toolbar (or Compare beside an issue in the Rev chip). The compare bar appears above the drawing; the earlier revision loads under the current one.
2. Slider: drag the divider to wipe between the earlier issue (left) and the current one (right). Overlay: both at once — the old issue's ink red, the new issue's blue, unchanged linework faded grey. Changes: only the red and blue, on white.
3. Sheets are lined up for you: the right page of a multi-page earlier issue is found from the title block (or by position), the way up is picked by shape, and a sheet re-plotted a few points off is nudged into place. When the match is weak the bar says so.
4. If a sheet is shown the wrong way round, click ↻ Turn. If the wrong page is paired, pick the right one from the page list in the bar. If the two don't sit over each other, click ⊕ Align: click a point on the current sheet, then the same point on the earlier one — a card walks you through it, and Reset alignment puts it back.
5. Sensitivity (1–5) sets how fine a difference counts, for the overlay highlight and the clouds alike. It's saved with the drawing, so a set plotted a hair heavier each issue can sit at 2 while a clean CAD set sits at 4.
6. Measuring works as normal while comparing; Exit compare returns to the plain drawing.

☁ Find changes — clouds as a checklist

One click clouds what changed on the sheet; tick each cloud off as you check it.

1. In Compare, click ☁ Find changes. Red revision clouds appear round each change on the sheet, and the Changes section of the panel lists them: click one to jump to it, tick it when you've dealt with it (it turns green).
2. A measurement sitting inside a cloud you haven't ticked gets a red CHECK tag on the drawing and in the panel, so the takeoff tells you what to look at. The page list shows “n to check” per sheet; the job's register shows the total.
3. Where the drawing has a text layer, the panel also lists text that was added or removed between the issues — a changed note or dimension you can read without hunting.
4. Changed the sensitivity? Click Find changes again: the clouds are redrawn, and any you had already ticked in the same place stay ticked. Delete a cloud with Del; Clear all clouds starts over.
5. The clouds are a guide: they find what the plotter changed, and show you where to look. They can't know what the designer meant — check the drawing before you rely on them, as you would with any revision.
6. Printing: the Print clouds on the PDF export tick in the Changes section puts them on the marked-up PDF (red to check, green done); untick it for a clean sheet. Clouds are kept with the drawing, so a colleague opening it sees the same checklist.

⇩ Overlay PDF — print the comparison

The red/blue overlay with its clouds, on a page the size of the sheet — for a variation claim or a quote pack.

1. In Compare, switch to Overlay or Changes, set the sensitivity you want, and click ⇩ Overlay PDF.
2. You get one page the size of the sheet: old issue red, new blue (unchanged grey in Overlay view, left out in Changes view), with this sheet's clouds drawn on it, and a caption strip below naming both revisions, the sensitivity and the date.
3. Nothing else is on it — measurements, notes and labels are the toolbar's PDF export, so you can send the change picture and the marked-up takeoff separately.

Exporting

Get your numbers out, client-ready.

⇩ Export to CSV

A grouped spreadsheet with subtotals — and a project roll-up by group name.

1. From the editor panel: Export to CSV gives you this drawing's takeoffs.
2. From the job page: Export CSV rolls up every drawing, summing matching group names across the whole job.
3. Opens cleanly in Excel with correct units (m, m², etc.).

⇩ Marked-up PDF

Send the drawing with your takeoffs drawn on it.

1. Click PDF in the editor toolbar.
2. You get a copy of the original with your visible measurements and labels flattened on — the original is untouched.
3. Visible scale zones are drawn as dashed purple boxes, so a checker can see which details were measured at their own scale.
4. Text notes print too, and revision clouds when Print clouds on the PDF export is ticked in the Changes section. For the red/blue comparison itself, see Overlay PDF under Revisions.

▤ Excel bill of quantities

Bring your own BoQ in, take off straight into its cells, and export it complete.

1. In the editor, click the BoQ tab (top-left, next to Drawing) and upload your .xlsx bill of quantities.
2. Click the quantity cell you want to fill, then click “Retrieve into …”. You're taken back to the drawing.
3. Tick measurements in the Measurements panel — across any drawings in the job — and their total carries into the cell live. Click Done when finished.
4. Double-click any other cell to edit it (rates, descriptions), or type =A1*B1-style formulas. Totals recalculate on screen as you go.
5. Click “Export .xlsx” to download your BoQ back out — formatting and formulas preserved, quantities filled in and refreshed from your latest measurements.

Working comfortably

Small things that make long sessions easier.

Make everything bigger

Scale the whole interface up on large or high-resolution monitors.

1. Use the Aa − % + control to scale all toolbar and panel text and icons. It's remembered between sessions.

↻ Rotate a sheet

A sheet plotted sideways turns a quarter at a time — measurements, zones, clouds and notes turn with it.

1. Click ↻ Rotate in the toolbar: the sheet turns a quarter clockwise. Click again for the next quarter.
2. Everything on the sheet turns with it, so nothing moves relative to the drawing. The turn is saved with the drawing, and the marked-up PDF export opens the same way up.
3. A new revision is shown the way its sheets were showing when you uploaded it, even if the file was plotted the other way round — so a set that comes back turned doesn't turn your takeoff.

⇲ Fullscreen

Hide the browser bars for maximum drawing area.

1. Click the ⇲ button in the editor toolbar to go fullscreen; click it again to exit.

Resize the panel

Give the Measurements panel more or less room.

1. Drag the divider between the drawing and the panel. Double-click it to reset.

Keyboard shortcuts

Switch tools without leaving the drawing.

1. Tools and actions all have single-key shortcuts — see the chips below.
2. Right-click is your friend: while drawing it offers Undo last point / Finish / Cancel; on a measurement it offers Rename, Change colour, Thickness (lines and shapes, with Apply to the whole group / everything), Hatch (closed shapes) and Delete; on several selected (Ctrl+click) it offers Thickness, Colour, Hatch and Delete for all of them; on a scale zone it offers Set zone scale… and Delete zone.

Shortcuts: V Select · M Calibrate · Z Scale zone · L Linear · P Path · A Area · R Rectangle · O Circle · C Count · N Text note · S Snap · W Line thickness · Esc Deselect · Del Delete · Ctrl+Z / Y Undo / Redo · Space Pan