

NEXSUS for Revit

Tool documentation — what each tool does and how to use it

NEXSUS adds a **NEXSUS** tab to the Revit ribbon, organised into panels: Account, Manage, Sheet Link, Printing, Site, Structure, Tiling and Premium. It runs on **Revit 2021 through 2027**.

Units. Every measurement you type into a NEXSUS dialog is in **millimetres (mm)**, regardless of your Revit project units.

Undo. Every tool wraps its model changes in a Revit transaction, so a single **Undo** reverts a run. Tools that work floor by floor use one transaction per floor.

Account

Login

Signs you in to your NEXSUS account. Your session unlocks the tools tied to your plan.

How to use

1. Click **Login**.
2. If you already have a valid session, NEXSUS shows your account email and the expiry date — nothing more to do.
3. Otherwise enter your credentials and confirm.

Notes

- The session persists between Revit sessions until it expires, so you normally sign in once.
- You do not have to run Login first — launching a protected tool while signed out prompts you automatically.

Logout

Ends the current session. Protected tools will prompt for sign-in again the next time you use them.

Manage

Links to Worksets

What it does

Organises linked Revit models into worksets. For each link you select, NEXSUS creates (or reuses) a matching workset and moves both the **link type** and all its **placed instances** into it, so you can control link visibility per workset.

Before you start

- The project must be **workshared**. If it is not, the tool says so and stops.
- At least one Revit link must be loaded.

How to use

1. Click **Links to Worksets**.
2. Tick the links you want to organise.
3. (Optional) Enter a **prefix** for the new workset names, for example a project code. Leave blank for none.
4. Confirm. NEXSUS reports how many worksets were **created**, how many existing ones were **reused**, how many link elements were **moved**, and any failures.

Notes

- Re-running is safe: worksets with matching names are reused, never duplicated.
- The whole run is one transaction — one Undo reverts it.

Numbering

What it does

Numbers elements in a **spatially sensible order** rather than in database order, writing the result into a parameter you choose. It handles multiple levels in one run and has dedicated logic for rooms.

How to use

1. Click **Numbering**.
2. Choose the **category** to number (Rooms, Doors, Windows and so on).
3. Choose the **level or levels** — all levels, or any combination from the list.
4. Choose the **target parameter**, where the numbers are written. **Nothing is pre-selected on purpose**, so you cannot overwrite the wrong field by accident.
5. Set **prefix**, **suffix** and **starting number**.
6. For **Rooms**, the connector-room options appear above the level list.
7. Confirm. NEXSUS reports how many elements were numbered and how many failed.

Ordering — how the sequence is decided

Numbering always runs **level by level, starting from the lowest selected floor**, and the sequence continues upward into the next level.

- **Non-room categories** use a shortest-path walk that is free to start anywhere, so numbers follow the natural run of the elements.
- **Rooms with no connector rooms** use a compact ordering that starts at the **top-left of the floor** and splits the plan recursively, so every area of the floor keeps a **contiguous block of numbers**. This is what prevents "Room 83 sitting next to Room 4" on large floor plates.
- **Rooms with connector rooms** are ordered by the apartment graph and start **bottom-left**.

Room options — connector and pass-through rooms

Connector rooms (corridors, lobbies, pass-throughs) are numbered **last on their own level** and are excluded from apartment grouping, which keeps apartment numbering clean. You choose how they are identified.

- **Select manually on plan (single level).** After confirming, click each connector room on the plan, then press **Finish**, or **Esc** to select none. Because picking happens in one plan view, tick exactly one level.
- **Select by room parameter value (any levels).** Pick a room parameter and the value it must equal; every matching room becomes a connector. The match is case-insensitive and needs no clicking, so it works across all levels. If nothing matches, NEXSUS asks whether to continue with no connector rooms.

Untick **Use connector / pass-through rooms** if you do not need this.

Manual selection — numbering in your own click order

Tick **Select elements manually on screen** when you want to decide the order yourself. This bypasses level collection and the automatic ordering entirely.

1. Confirm the dialog. A small **picking window** opens and stays open while you work.
2. Click each element in the model **in the order you want it numbered**. Each one **highlights as you pick it**, so you can see the run building up.
3. Click **Finish** to write the numbers in exactly that order.
4. The window **stays open** and reports the result inline. The picked list clears and the **start number advances by the number of elements you just did**, so you can immediately number a second batch without reusing numbers.
5. Close it with **Cancel** when you are done. **Reset** clears the current picks without numbering.

Clicking an already-picked element, or empty space, just restores the highlight — it will not disturb the order. Category, target parameter, prefix, suffix and start number all still apply; the level and room sections are hidden while manual mode is on.

Notes

- One transaction — Undo reverts the run.
- If nothing is found for the chosen category and levels, the tool tells you and stops.

Warnings

What it does

A warning browser for the model. It lists Revit's warnings, **always gets you to the offending element**, and can auto-solve three common families of warning.

The window is **modeless** (one instance). Leave it open and keep working in Revit while you review.

Finding the element — "Show" always lands on a view

Clicking **Show** selects the elements and then works down this chain until something can actually display them:

1. Zoom to the elements in the first open view where they are visible.

2. Otherwise the level's plan view.
3. Otherwise any 3D view.
4. Otherwise NEXSUS **creates or updates a 3D view called "NEXSUS Warnings"** — a fresh view that hides nothing — and puts a section box around the element.

View-specific elements activate their owner view. Only a genuinely geometry-less element, such as an unplaced room, falls back to selecting without a view.

Auto-solvers

Warnings are classified from their description, then:

- **Identical duplicates** are deleted **only** when the two elements match on type, placement **and every parameter value**. Anything less is reported for you to judge, never deleted.
- **Problem rooms** covers the room warnings plus placed rooms with zero area plus unplaced rooms. These are reviewed **one at a time** in the window's review bar, with **Remove**, **Edit** or **Ignore** per room. Choosing Edit takes you into the room to fix it, and you press Finish when done.
- **Off-axis lines** within **0.75°** of a 45° increment are snapped to that increment, rotating about the line's midpoint. Walls are corrected through their location curve; sketch lines are corrected inside a sketch edit scope, which requires **Revit 2022 or newer**.

Notes

- Every model change is queued and executed on Revit's own event loop, so the window never fights Revit for control.
- Duplicates that are not a perfect match are deliberately left alone — review them yourself.

Sheet Link

Both editors are **modeless, single-instance** windows that edit a **live spreadsheet grid inside Revit**. There is no Excel export and import round-trip any more.

The grid — shared by both editors

- Click a cell to edit it in place; select multiple cells by dragging.
- **Ctrl+D** fills down from the top cell of the selection, **Ctrl+R** fills right.
- **Copy and paste** work with tabs and newlines, so you can paste a block **straight out of Excel** and copy back into it.
- Drag the **corner handle** of a selection to fill.
- Rows with unsaved edits are **highlighted** until you Apply.

Sheet Editor

What it does

Edits sheets and the views placed on them from two grids: **Sheets** and **Views**.

Sheets grid

- Rename and renumber sheets, and edit their other parameters.
- The **Title Block** column retypes an existing sheet to a different title block, and places one if the sheet had none. Leaving the cell unchanged does nothing.
- **Add Sheet** and **Delete Selected** happen **immediately**, in their own transactions. A newly created sheet gets a real ID at once and appears in the grid, so you can attach views to it in the same session.

Views grid

- One row per view: read-only **View Name** and **Category**, followed by **Sheet 1**, **Sheet 2** and so on, holding sheet numbers.
- On Apply, NEXSUS **compares the sheet numbers you typed against where each view actually is**, and places or removes viewports and schedule instances to match. It never deletes the view itself.
- Views are matched by ID first, then by name plus category, then by unique name — so **two views with the same name are told apart by their category**.
- If a row references a view or sheet number it cannot resolve, that **row is skipped**. A typo can never be interpreted as "remove this view from its sheet".
- Only schedules and legends may be placed on more than one sheet.

How to use

1. Click **Sheet Editor**.
2. Switch between the **Sheets** and **Views** grids with the toggle.
3. Make your edits. Value changes stage as unsaved; Add Sheet and Delete apply straight away.
4. Click **Apply**. All staged value changes commit in one transaction, including renumbering, which is safe even when you are swapping two sheet numbers.
5. The window reloads from the model, so you are always looking at true model state.

Schedule Editor

What it does

Opens any schedule as an editable grid and writes your edits back to the elements' parameters.

How to use

1. Click **Schedule Editor**.
2. Pick the schedule from the list.
3. Edit cells directly in the grid.
4. Click **Apply**. Only the cells you actually changed are written back.

Notes

- Calculated fields, combined fields, the category column and any non-editable parameter are shown **read-only**.
- There is no add or delete row — a schedule can only edit elements that already exist.

Printing

ProSheets Lite

What it does

Batch-exports sheets and views to **PDF or DWG** with rule-based file naming.

How to use

1. Click **ProSheets Lite**.
2. Tick the **sheets and views** to export.
3. Choose the **format**, PDF or DWG.
4. Build the **file name** from sheet and view fields — number, name, revision and so on.
5. Choose the **output folder** and start.
6. A progress window shows each item as it is written, and stays open so you can watch a long batch.

Notes

- Your export preferences are remembered between sessions.
- Good naming rules give you a clean, sortable set, for example [A-101 - Ground Floor Plan.pdf](#).

Site

Topography

What it does

Maps the shape of one or more **floor slabs onto topography surfaces or toposolids**, so the slab follows the terrain. Optionally lifts the result by a fixed amount.

How to use

1. Click **Topography**.
2. Set the **raise amount (mm)** — use 0 for none — and click **Run**.
3. **Step 1 of 2.** Click one or more **floors**, then press **Finish**.
4. **Step 2 of 2.** Click one or more **topographies or toposolids**, then press **Finish**.
5. NEXSUS combines the selected topography data and maps it onto the chosen floors.

Notes

- Multiple floors and multiple topographies can be done in one run; the topography data is combined.
- **Esc** at either step cancels without changes.

Structure

Stiffener + Lintel

What it does

One command that places **stiffeners in blockwork walls**, then **lintels over doors and windows**. The order matters: each lintel spans the bay between the jamb stiffeners either side of its opening and **reads their placed positions out of the model**, so stiffeners must exist before lintels are calculated. Either step can be switched off in the dialog, so you can re-run lintels alone after editing openings.

Before you start

- A **stiffener family** and a **lintel family** loaded in the project.
- Walls are treated as blockwork by name — the wall's name or wall-type name must contain "**blockwork**", and the match is not case-sensitive.

How to use

1. *(Optional)* Select specific walls. With nothing selected, NEXSUS uses all blockwork walls.
2. Click **Stiffener + Lintel**.
3. Choose the families, tick **which floors to process** in the floor checklist, and tick or untick **Run stiffeners** and **Run lintels**.
4. Confirm. One progress window covers both phases. A summary reports the totals and anything skipped.

How stiffeners are placed

- **Junctions.** L-corners, T-junctions and X (cross) junctions each get the appropriate stiffener.
- **Door and window jambs.** A stiffener each side of every opening.
- **Regular spacing.** Long runs are filled at your chosen spacing.
- **Merging and trimming.** Stiffeners too close together are merged, corner overlaps are trimmed, and a stiffener close to a free wall end is extended to reach it.
- **Small piers are filled.** A leftover strip of wall narrower than a cement block, such as the short return between an opening and a corner, gets one full-height stiffener spanning it. Piers too narrow to hold a stiffener are left alone.

Jamb heights

Jamb stiffeners run to the **opening head by default**, not to the top of the wall. A jamb is taken to full wall height only when there is a genuine spacing gap on one side — that is, an actual neighbouring stiffener roughly a full spacing away that the jamb needs to bridge to. A wall end or corner carries that side on its own. The same rule applies to the single pier stiffener placed between two openings that are too close together to hold two separate jambs. Every full-height decision is written to the log if you need to check one.

How openings are measured

Openings are measured from the **rough opening** — Rough Width and Rough Height — and only fall back to the nominal Width and Height, or to the physical geometry, when a family has no rough parameters. This matters: the nominal opening is smaller than the hole in the blockwork, so measuring it nominally puts jamb stiffeners inside the reveal and leaves the opening under-blocked.

Families that do not follow the standard, such as balcony railings modelled as window instances, are handled by the geometry fallback and are treated as ordinary openings: detected, and blocked out so nothing is placed through them.

How lintels are placed

- A lintel's length comes from the **bay between the jamb stiffeners** it bears on. No bearing allowance is invented.
- Bands of lintels running up the wall are **split around every opening they would otherwise cross**, including openings that were skipped, so a lintel is never placed through glazing.
- Lintels are positioned by their **soffit**, the underside of the bounding box, so placement does not depend on where the family's origin sits.
- Any opening that is skipped, and any lintel that is dropped, is written to the log with the reason.

Floors are independent

Walls are grouped by base level and each floor is processed in its own transaction. Within a floor, a wall only ever reads walls, openings, stiffeners and lintels **on that same floor** — a stacked wall's stiffener from the floor above shares the same plan position and would otherwise be read as a phantom full-height column. A window straddling two floors is handled entirely by its host wall.

Notes

- **Re-running stiffeners adds another set on top of the existing ones.** Undo or delete the previous stiffeners first.
- Re-running **lintels** is safe: a wall only claims and clears a lintel whose footprint genuinely overlaps and runs along that wall, so walls modelled as several collinear segments will not delete each other's lintels.
- Only straight blockwork walls are processed; curved walls are skipped and reported.
- One transaction per floor — Undo reverts a floor at a time.

Tiling

Tiling

What it does

Divides a floor into Revit **Parts** following a brick-tile pattern, with a configurable tile size and joint gap. Built for cladding and paving layouts that have to follow a curved edge.

How to use

1. *(Optional)* Select the floor first. If exactly one floor is selected NEXSUS uses it; otherwise it asks you to pick one.

2. Click **Tiling**.
3. Set the parameters and confirm.

Setting	Meaning
Width	Tile width and row spacing
Length	Tile length and cross spacing
Gap	Visible joint gap between Parts
Pattern	Checkered (all cuts) or Staggered . Staggered can run horizontal (straight cuts) or vertical (curved cuts).

Notes

- The tool creates Parts and then divides them in two internal steps. Let it finish, and do not interrupt between them.
- If the element you pick is not a Floor, the tool tells you and stops.

Plans

The **Upgrade to Premium** button on the ribbon opens the upgrade window and lists what Premium unlocks:

Stiffener + Lintel, Sheet Editor, unlimited Pro Sheets exports and Topography, automatic numbering, warning auto-solve, and uniform tiling.

Some tools are **metered** on the free plan: you get a set number of runs per month, and the counter resets at the start of each month. When the quota is spent, NEXSUS shows the upgrade window instead of running. Premium use is never metered.

To confirm before publishing: the exact free monthly limit for each metered tool, and which tools are premium-only versus metered. These have not been verified against the code.

Where your data is stored

Everything NEXSUS keeps lives under `%APPDATA%\NEXSUS\`:

File	Contents
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accounts.csv , nexus_session.json	Your account and session
nexus_plugin.log	Activity log — attach this when reporting a problem
ProSheetsLite\settings.json	Your printing preferences

Troubleshooting

Symptom	What to check
"You must sign in before using this NEXSUS tool."	Run Login .
"This is a Premium feature."	Your account is on the Basic plan. Use Upgrade to Premium .
"You have used all your free runs this month."	The monthly quota for a metered tool is spent. It resets next month, or upgrade for unlimited use.
"Family ... was not found in the project."	Load the stiffener or lintel family, and check the name in the dialog matches it exactly.
Stiffener + Lintel does nothing on a wall	The wall's name or wall-type name must contain " blockwork ". Curved walls are skipped.
Stiffeners look doubled-up	The tool was re-run without removing the previous stiffeners. Undo or delete them and run once.
Jamb stiffeners run higher than expected	Full height is only used where there is a real spacing gap on one side. Check nexus_plugin.log — every full-height decision is recorded there with its reason.

A lintel is missing over an opening	Skipped openings and dropped lintels are logged with the reason.
"This project is not workshared" (Links to Worksets)	Worksets require a workshared project.
Off-axis line fix does nothing on sketch lines	Sketch line correction requires Revit 2022 or newer .
Anything else	Check %APPDATA%\NEXSUS\nexus_plugin.log and include it when reporting the issue.