

NOVA WORKBENCH

Nova Landscape

Sculpt terrain · Build the landscape · Dig the pit · Get the quantities — inside SketchUp



User Guide — version 1.0

Nova Enginera AS · novaworkbench.no · post@nova-enginera.no

Contents

1. What Nova Landscape does
2. Installation
3. Free trial & licence activation
4. Quick start — from bare ground to a finished site
5. The panel
6. Getting terrain (and pairing with Nova Geo)
7. Sculpting brushes
8. Rocks & bedrock
9. Nature and vegetation
10. Roads, paths and water
11. The building pit (excavation)
12. Cut & fill and quantity reports
13. Finishing: clean-up, optimise, 2D drawing mode
14. Keyboard shortcuts
15. Languages & troubleshooting

1 · What Nova Landscape does

Nova Landscape turns SketchUp into a complete terrain, landscape and groundworks tool. Sculpt ground with brushes that follow every stroke, scatter boulders and expose bedrock, plant forest, cut roads, add water — then set the building, dig the excavation pit with correct side slopes, and read cut & fill as a heat map with a quantity report in cubic metres.

- **Sculpting brushes** — raise, lower, smooth, erode, grade and rake, directly on the terrain, non-destructively.
- **Rocks & bedrock** — boulder fields with a choice of stone types, and exposed bedrock — smooth outcrops or blasted rock — with optional moss.
- **Nature** — Norwegian trees (birch, spruce, pine, broadleaf), bushes and flowers that follow the terrain, plus a 2D symbol mode for drawings.
- **Roads and paths** — draw a path and it grades itself into the terrain, stays editable.
- **Water** — ponds and streams that find the low points naturally.
- **Building pit** — turn a box into an excavation with correct side slopes and a clean bottom.
- **Quantities** — cut & fill heat map plus mass reports in cubic metres — the numbers that drive groundworks pricing.

Best paired with Nova Geo. Landscape works on any terrain — including a flat plot you shape yourself — but with Nova Geo you do all of it on the real terrain of the real site, so every volume figure lines up with what the crew meets on site.

2 · Installation

1. In SketchUp, open **Window** → **Extension Manager**.
2. Click **Install Extension** and select `nova-landskap.rbz`.
3. Restart SketchUp. You will find **Nova Landscape** in the Extensions menu.

Requirements: SketchUp 2023 or newer, on Windows 10/11 or macOS 12+. No external programs or render engines needed — everything is native SketchUp geometry.

3 · Free trial & licence activation

Nova Landscape includes a **free 7-day trial** — no licence needed. When the trial ends, the licence dialog opens by itself:

1. Buy Nova Landscape at **novaworkbench.no**. You receive an e-mail with an **activation token**.
2. Open the plugin — the licence dialog appears. Paste the token and click **Activate on this computer**.
3. Restart SketchUp. Done — the licence is stored on this machine and works offline from then on.

The licence is locked to your computer. You get one free re-activation when you switch machines; beyond that, e-mail `post@nova-enginera.no`. If the computer running SketchUp is offline, use the manual fallback at `novaworkbench.no/activate` with the machine ID shown in the dialog.

4 · Quick start — from bare ground to a finished site

1. Open **Extensions** → **Nova Landscape** → ★ **Open Nova Landscape panel**.
2. Get terrain: fetch the real site from a **Nova Geo anchor**, or make a local terrain from any selected face (chapter 6).
3. Press **R** and sculpt — pull hills and hollows straight out of the ground.
4. Press **S** and drag to scatter boulders; hold **Shift** to expose bedrock.
5. Plant trees and ground cover from the **Nature** tab; cut a path with **P**; add water where the ground is low.
6. Model the building as a simple box, then **Building pit** → **Box** → **building pit** — the excavation is dug with correct side slopes.
7. Open **Cut/fill vs original terrain** for the heat map, and **Volume snapshot** for the masses in cubic metres.

That's it: shaped ground, dressed site, a correct pit and real quantities — all inside SketchUp.

5 · The panel

The panel is the home of the plugin. A sticky tab row keeps every section one click away:

Tab	What it holds
Terrain	Fetch/build terrain, refine detail, orthophoto drape, contours.
Sculpt	All shaping brushes, brush size/strength, stone & bedrock type pickers, embed depth.
Road	Paths and roads, road elevations, stamping faces into the terrain.
Volume	Cut & fill heat map, volume snapshots and history, stone quantities.
Nature	Trees, bushes, flowers, water — planting brush with size and density control.
Excavation	Building pits: create from box, re-stamp, corner markers, sliver clean-up.

The ? button opens a built-in help page with full explanations of every section, and the **EN/NO** toggle switches the whole panel between English and Norwegian instantly.

6 · Getting terrain (and pairing with Nova Geo)

- **Terrain from Nova Geo anchor** — if Nova Geo is installed and the model has an anchor, Landscape fetches the real terrain of the site directly. Real ground in, real volumes out.
- **Local terrain from a selected face** — no geolocation needed: select any face and turn it into a shapeable terrain surface. Perfect for concept studies and flat plots.
- **Refine terrain** — increases mesh detail where you need finer sculpting; the level of detail is set globally in the panel.
- **Orthophoto + cadastral overlay** — drape the aerial photo and boundary lines over the terrain (uses the Nova Geo anchor).
- **Contours from terrain** — generate contour lines from the current surface for drawings.

Tag discipline. Everything Nova Landscape builds is grouped and tagged (Nova ... tags), so terrain, rocks, vegetation, water and pits can be toggled independently.

7 · Sculpting brushes

Six brushes cover the whole shaping workflow. Activate them from the panel, the Extensions menu, or the single-key shortcuts:

Brush	Key	What it does
Sculpt	R	Raise / lower / smooth. Pull hills and valleys straight out of the ground.
Erode	E	Natural weathering and roughness. Shift = surface roughness, Ctrl = bubble.
Rocks & Bedrock	S	Drag = scatter boulders, Shift = expose bedrock, Ctrl = paint moss (chapter 8).
Stone steps	T	Lays stone slabs as steps along your drag; Shift recesses them into the ground.
Rake stones	K	Move placed stones: drag = roll, Shift = gather, Ctrl = drop to ground.
Grade	F	Flatten, slope or curve ground to a level — building pads and planar surfaces.

- **Scroll** adjusts brush size; modifier + scroll adjusts the brush's second parameter (strength, stone size, roughness scale...). The on-screen HUD always shows what scroll does right now.
- All shaping is **non-destructive to your model** — it edits only the Nova terrain surface, and every stroke is one undo step.

8 · Rocks & bedrock

- **Stone types** — blasted rock (sharp, faceted), river stone (rounded) and slate (flat flakes). Pick the type in the panel or the quick-pick ring around the cursor.
- **Bedrock types** — smooth coastal outcrop, block bedrock with ledges, knoll, and blasted rock face with deep cracks. Each has its own real rock texture.
- **Moss** — **Ctrl**-drag paints moss on the tops of stones and in bedrock cracks; **Ctrl+Shift**-drag removes it.
- **Embed depth** — set how deep stones settle into the ground (0–60 %), so boulders sit naturally in a slope instead of floating on it.
- **Shaping single stones** — click a placed stone with the Sculpt brush to make it unique and drag its facets in or out; its volume attribute updates automatically.
- Stones are placed as lightweight shared components — hundreds of boulders cost almost nothing in file size, and every stone carries its size class and volume for the quantity report.

9 · Nature and vegetation

- **Norwegian tree family** — birch (white stems), spruce, pine (bare crooked lower trunk, umbrella crown) and broadleaf, with natural variation between individuals. Built to read as real trees in both viewport and renders — with correct, dappled shadows.
- **Bushes and flowers** — ground cover, flowering bushes, juniper and meadow flowers.

- **Planting brush** — drag to plant. **Scroll** = plant size, **Shift** +scroll = per-stroke count, **Ctrl** +scroll = brush size. Everything lands on the terrain surface.
- **Lightweight by design** — each species is stored once and instanced; a whole forest adds only transformations, not geometry.
- **2D drawing mode** — one menu toggle swaps photoreal foliage for clean 2D plan/elevation symbols on their own tag, so site plans and elevations come out as crisp line drawings.

10 · Roads, paths and water

- **Path** → **trail/road** (**P**) — draw the line and the road grades itself into the terrain, with a gravel surface, and stays editable afterwards.
- **Road elevations** — place elevation labels (metres above sea level) along the road line.
- **Stamp face + surface** — press any face (a driveway, a patio, a plaza) into the terrain, with or without generating the surface. Sloped and multi-facet undersides are followed.
- **Water** — add a water surface at a chosen level; it fills the low points of the terrain naturally, for ponds and streams.

11 · The building pit (excavation)

Model the building volume as a simple box in place, then:

1. **Building pit** → **Box** → **building pit** — the box becomes an excavation: the box bottom is the **finished floor level**, and the pit is dug deeper automatically for the build-up you specify (slab, insulation, crushed stone).
2. The pit gets **correct side slopes** and a clean bottom — the shape the groundworks crew actually digs.
3. **Re-stamp all pits** — reshaped the terrain afterwards? One click re-cuts every pit.
4. **GPS corner markers** — toggle coordinate markers on the pit corners for setting-out.

Tip. Keep the pit box axis-aligned with the building, and let Landscape do the digging — editing the excavation by hand breaks the link to the volume accounting.

12 · Cut & fill and quantity reports

- **Set current terrain as original reference** — do this before you start shaping (fetching terrain does it automatically). All cut/fill is measured against this reference.
- **Cut/fill vs original terrain** — colours the terrain as a heat map: where ground is removed, where it is added, and how much. A grading decision anyone can read instantly. Clear the colours again with one click.
- **Volume snapshot** — the masses in cubic metres, in and out, at this moment. Snapshots are kept as a history so you can compare alternatives.

- **Stone quantities** — counts placed stones by size class (S/M/L/XL) with volume and tonnage, slab steps by count and area, and painted bedrock area — as an HTML report plus a machine-readable JSON.

13 · Finishing: clean-up, optimise, 2D drawing mode

- **Clean / tidy model** — removes duplicate terrain surfaces and other shaping left-overs that accumulate during heavy editing.
- **Optimise terrain (finalize)** — when you're done shaping: merges coplanar areas so flat zones use fewer triangles, restores the orthophoto drape, and purges unused data. The shape stays identical; the file gets smaller.
- **Shaping mode** — a toggle that hides everything except the terrain and pit outlines while you sculpt, and restores the exact visibility state afterwards.
- **Nature 2D drawing mode** — swap 3D foliage for plan/elevation symbols before exporting drawings (chapter 9).

14 · Keyboard shortcuts

Key	Tool
R	Sculpt — raise / lower / smooth
E	Erode (Shift = roughness, Ctrl = bubble)
S	Rocks & bedrock (Shift = bedrock, Ctrl = moss)
T	Stone steps (Shift = recess)
K	Rake stones (Shift = gather, Ctrl = drop)
F	Grade — flatten / slope / curve
P	Path → trail / road
Scroll	Brush size (modifier + scroll = second parameter — see HUD)

The full, always-current list lives under **Shortcuts / help...** in the Extensions menu.

15 · Languages & troubleshooting

Languages

The panel has an **EN / NO** toggle at the top — every label and message switches between English and Norwegian instantly.

Troubleshooting

Symptom	Fix
Brushes don't react on my surface	The brushes work on Nova terrain. Use Local terrain from selected face to convert any face into a shapeable surface first.
Cut/fill heat map shows nothing	Set the original reference first (Set current terrain as original reference), then shape, then run the comparison.
The model feels heavy after long shaping sessions	Run Clean / tidy model , and Optimise terrain when the shape is final.
Trees show as green symbols in my export	Nature 2D drawing mode is on — toggle it off for 3D views, on for plans/elevations.
New menu item missing after update	Restart SketchUp — menus are only built at startup.
Licence dialog says the licence doesn't cover this plugin	You activated a different product's token. Use the token from your Nova Landscape purchase e-mail, or e-mail us.