



Import PDOK Geodata for Vectorworks User Guide

STB VW Tools

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STB-VW Tools Import PDOK Geodata for Vectorworks User Guide

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Installation

1. Download the supplied STB-VW Tools .vwlibrary file to your computer.
2. In Vectorworks, choose Tools > Plug-ins > Plug-in Manager.
3. Open Third-party Plug-ins, click Install, and select the .vwlibrary file.
4. Add Import PDOK Geodata to your active workspace when Vectorworks asks. You can also add it later with the Workspace Editor.
5. Restart Vectorworks when prompted.

Licensing

Import PDOK Geodata for Vectorworks uses the STB v2 licensing runtime. If Vectorworks reports a license error, install or refresh the supplied STB-VW Tools licensing files before importing.

Tool Overview

Import PDOK Geodata for Vectorworks brings Dutch geodata into a georeferenced Vectorworks document. The command supports five workflows:

- **2D PDOK features.** Import roads, boundaries, terrain objects, water, buildings, and other OGC API Features collections as styled Vectorworks geometry.
- **AHN terrain.** Create a DTM or DSM terrain mesh, optionally textured with an AHN, RGB, or colour-infrared WMS image.

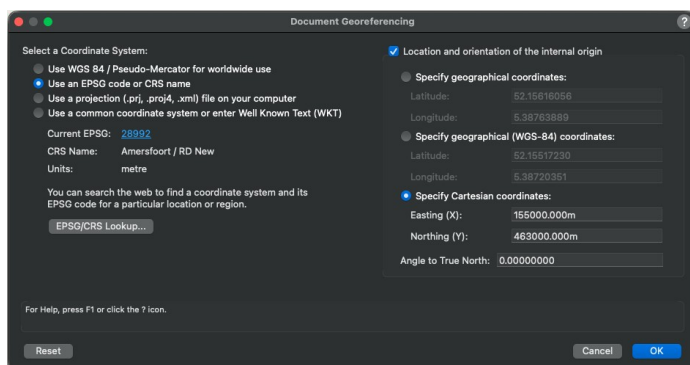
AHN LiDAR point clouds. Download native LAZ or COPC files for the source tiles that intersect the selected area.

- **3D BAG buildings.** Create one building mesh per building or city object at the chosen level of detail.
- **3D Basisvoorziening.** Import editable and render-oriented 3D models, flat building-height polygons, Quantized Mesh terrain, or DSM point-cloud files.

Each import uses either a rectangle selected before the command starts or an area you draw when prompted. Keep import area rectangle is selected by default so the same rectangle can be reused.

Before You Start

- Use File > Document Settings > Georeferencing to georeference the document or active design layer in Amersfoort / RD New (EPSG:28992).
- Missing or unusable RD positioning is refused. Rotated georeferencing, shifted user origins, and local drawing coordinates are supported.



- You may select a rectangle around the import area before starting. If none is selected, the command can activate the Rectangle tool so you can draw the area.

- Use the Layer Plane or a horizontal 3D plane. Screen Plane rectangles, rectangles tilted in 3D, and imports started from Rotated Top/Plan view are refused. Rotated Top/Plan is a view setting, not document georeferencing rotated relative to north.
- A rectangle rotated within its own plane is accepted. Its axis-aligned outer bounds define the imported area.
- The import area must overlap the Netherlands.
- Start with a small area when testing a dense source or a detailed terrain mesh.

Running the Command

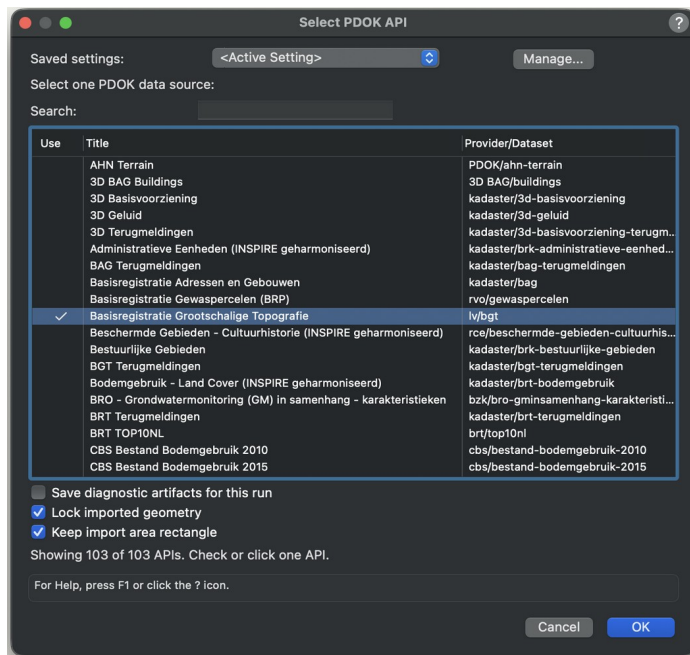
- 1. Choose Import PDOK Geodata from the STB Tools menu. On first use, an introduction covers import types and the RD New requirement. Its checkbox hides only this introduction; the later area checkbox remembers Yes.**
 - 2. Confirm the rectangle, or choose Yes to draw one. Select Do not show this message again only to remember Yes.**
 - 3. In Select PDOK API, choose a workflow or a regular PDOK OGC API Features source. The list is loaded from the current official PDOK catalogue. A source with a known temporary outage remains visible as Temporarily unavailable and cannot be selected.**
 - 4. Choose the source options and click OK. Keep import area rectangle retains the rectangle; with this off, it is removed only when the import begins. Back or Cancel keeps it.**
 - 5. Follow the progress through downloading, drawing, and locking. Use Cancel to stop a long import.**
- If drawing coordinates are not RD, the finished dialog confirms correct georeferenced placement. To display RD coordinates, choose Tools • Origin • User Origin • Set User Origin to match the Georeferencing coordinate system.**

Choosing from long lists

Lists with more than ten choices show a Search field. Enter part of a name or identifier to reduce the visible rows; clear the field to restore the full list. Filtering does not clear choices that are temporarily hidden.

In a multi-selection list, Option-click a checkbox on macOS or Alt-click it on Windows to check or clear all visible rows. Select All Shown and Select None remain available where shown.

When a selection or coverage warning can be corrected, the same options dialog reopens with your choices preserved. Adjust the selection and continue.



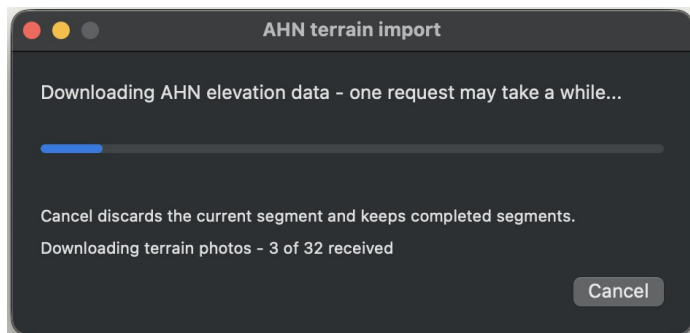
Progress and cancelling

The progress dialog shows the current phase of every 2D, AHN Terrain, AHN LiDAR, 3D BAG, and 3D Basisvoorziening workflow.

Cancel requests a controlled stop. A network request or Vectorworks operation already in progress finishes before the plug-in can respond.

Cancelling during downloading creates no new Vectorworks geometry. Cancelling during drawing keeps and locks the completed objects, including completed 3D Basisvoorziening geometry, even when Lock imported geometry was turned off.

For segmented AHN terrain, completed segments are kept and the incomplete segment is removed. One Undo removes the output retained by the stopped command.



For AHN LiDAR and 3D Basisvoorziening point-cloud downloads, completed files remain in the chosen folder when you cancel. AHN LiDAR also keeps the current partial download. Starting again creates a separate job folder rather than resuming the old one automatically. Undo does not remove downloaded files.

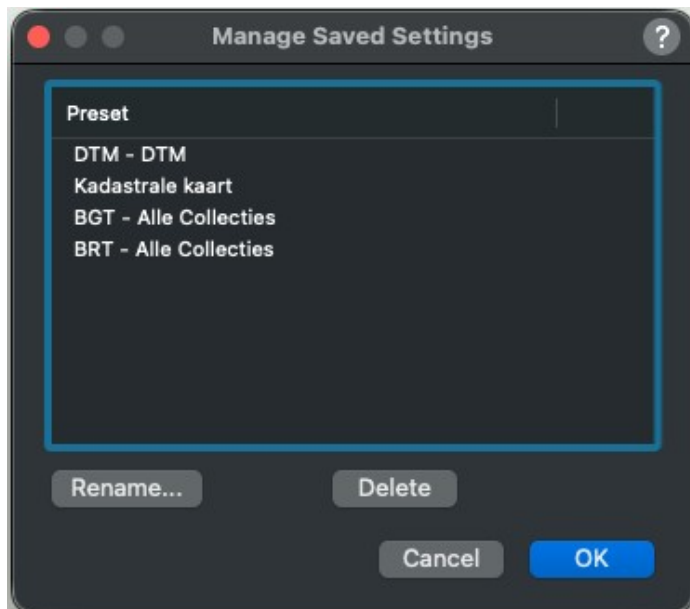
Lock imported geometry

Lock imported geometry is enabled by default. Leave it enabled to protect project context, or turn it off when you want immediately editable output.

Saved Settings

Saved settings are deliberate, named choices. They are stored per Vectorworks user and are loaded only when you choose one; the plug-in does not silently restore the last-used setup.

- Saved settings: The first source dialog lists all saved settings. The next dialog lists only saved settings for the selected data source.
- Save as Preset... Store the current choices under a name you enter.
- Manage... Rename or delete saved settings.



- <Active Setting>. The current controls do not exactly match a saved setting, or no saved setting is loaded.

Every saved setting stores its source, locking choice, Keep import area rectangle choice, and diagnostics choice. Saved settings created before Keep import area rectangle existed default to keeping the rectangle.

A 2D saved setting also stores collections, the selected style, and the BGT pictogram choice when available. An AHN Terrain saved setting stores elevation, texture, terrain detail, texture quality, interpolation, and Maximum texture resolution. An AHN LiDAR saved setting stores the latest-per-tile or selected generation and delivery choices, plus the tile-grid choice.

A 3D BAG saved setting stores the detail level. A 3D Basisvoorziening saved setting stores selected collections and editions, CityJSON detail, Apply BGT-derived colours, Quantized Mesh terrain and texture choices, Maximum texture resolution, the tile-seam treatment, and the point-cloud tile-grid choice.

If a stored collection or service layer no longer exists, the missing choice is removed and the plug-in asks you to select a replacement.

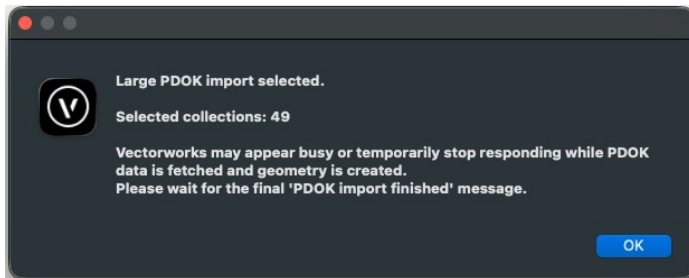
2D PDOK Feature Imports

Use a regular PDOK OGC API Features source when you need plan geometry.

1. Choose a PDOK data source in Select PDOK API.

2. In Select Collections, check one or more collections and use Search to narrow long lists. If Style is shown, choose the published map style before importing.

3. For supported BGT collections, enable Draw object pictograms to draw native IMGeo pictograms; leave it off for group-coloured point markers and undecorated area or line geometry. Use Select All only for small areas or lightweight sources, because dense collections over a large area can take a long time or time out.



4. Click OK to import the checked collections inside the import area.

2D import output

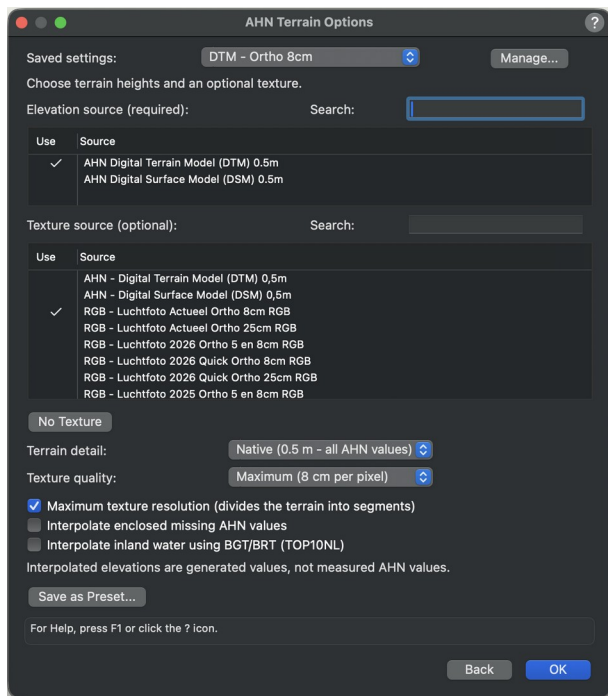
- The plug-in creates Vectorworks geometry for returned features.
- Published map styles are translated to native Vectorworks fills and Pattern Fills, line colours and opacity, complex line types, outlines, labels, markers, and supported BGT pictograms.
- Objects are organized into semantic classes based on provider, dataset, and collection.
- Labels are sized for the active design layer scale. Long BGT and BRK house-number ranges are shown smaller and may be divided over two lines to keep them readable and reduce overlap.
- Each run adds new objects; earlier imports are not removed automatically.



AHN Terrain Imports

AHN Terrain creates a 3D terrain mesh from a required elevation layer and can optionally drape an image over that mesh.

1. Choose AHN Terrain in the source list.
2. Choose DTM for ground terrain or DSM for surfaces such as buildings and vegetation. DSM can contain sharp vegetation peaks and leaning roof edges. These effects come from the source elevation measurements and do not mean the terrain is misplaced.
3. Optionally choose an AHN, aerial-photo, or false-colour-infrared texture source. Choose No Texture for geometry only.
4. Choose terrain detail and texture quality. When a texture is selected, enable Maximum texture resolution to keep imagery sharp across a larger area. Then click OK.



When the document georeferencing is rotated relative to the RD axes, Terrain area appears if the rectangle is also rotated relative to those axes. A shifted user origin or local drawing coordinates alone do not show this choice. Cover the whole rectangle downloads a larger north-aligned terrain block so every corner is included. Keep the drawn size limits the block to the width and height you drew, which can leave corners without terrain. A warning reports a substantial shortfall before the import starts. This area-specific choice is not stored in AHN saved settings.

The mesh corners are placed on exact AHN value positions. The north-west corner moves to the nearest 0.5 m AHN value position (at most 0.25 m). The requested size is retained when it is a whole number of detail steps; otherwise it grows to the next complete step. The image request uses the exact patch spanned by those mesh corners.

Terrain detail

- **Native (0.5 m - all AHN values).** Uses every published AHN value.
- **Generalized (1 m - every 2nd AHN value).** Uses every second published value; it does not average intermediate relief.
- **Generalized (2 m - every 4th AHN value).** Uses every fourth published value; it does not average intermediate relief.

Texture quality

- **Standard.** Requests 1000 pixels on the longest image side.
- **High.** Requests 2000 pixels on the longest image side.
- **Maximum.** Requests 4000 pixels on the longest image side. The service maximum may reduce this.

Maximum texture resolution

Maximum texture resolution divides textured terrain into segments. Each segment receives its own source image, which keeps the imagery sharp across larger areas.

When this option is enabled, Standard, High, and Maximum are shown as ground resolution in centimetres per pixel instead of one image width. The chosen source determines the available resolutions.

The maximum selected size is 2000 m per side. Without segmented textured terrain, one WCS response limits the actual side to 1999.5 m at 0.5 m detail, 1999 m at 1 m detail, or 1998 m at 2 m detail; the warning and finished dialog show requested and actual sizes. When segmented textured terrain is enabled, adjoining WCS requests share their boundary value so an exact 2000 m mesh remains possible. Large detailed meshes trigger a warning because they can contain many triangles.

Interpolation options

AHN source data can contain locations without a measured elevation. By default, the terrain remains open at those locations. For DTM imports, Interpolate enclosed missing AHN values fills gaps that are completely surrounded by available terrain heights. Interpolate inland water using BGT/BRT (TOP10NL) fills missing elevations within recognized inland water. Both options are off by default and are unavailable for DSM imports. Interpolated elevations are generated values, not measured AHN values. The selected options are stored in AHN saved settings.

AHN LiDAR Point-Cloud Downloads

AHN LiDAR Point Clouds downloads the provider's complete native LAZ or COPC files for every source tile that intersects the selected rectangle. It downloads files only; it does not create a Vectorworks point-cloud object.

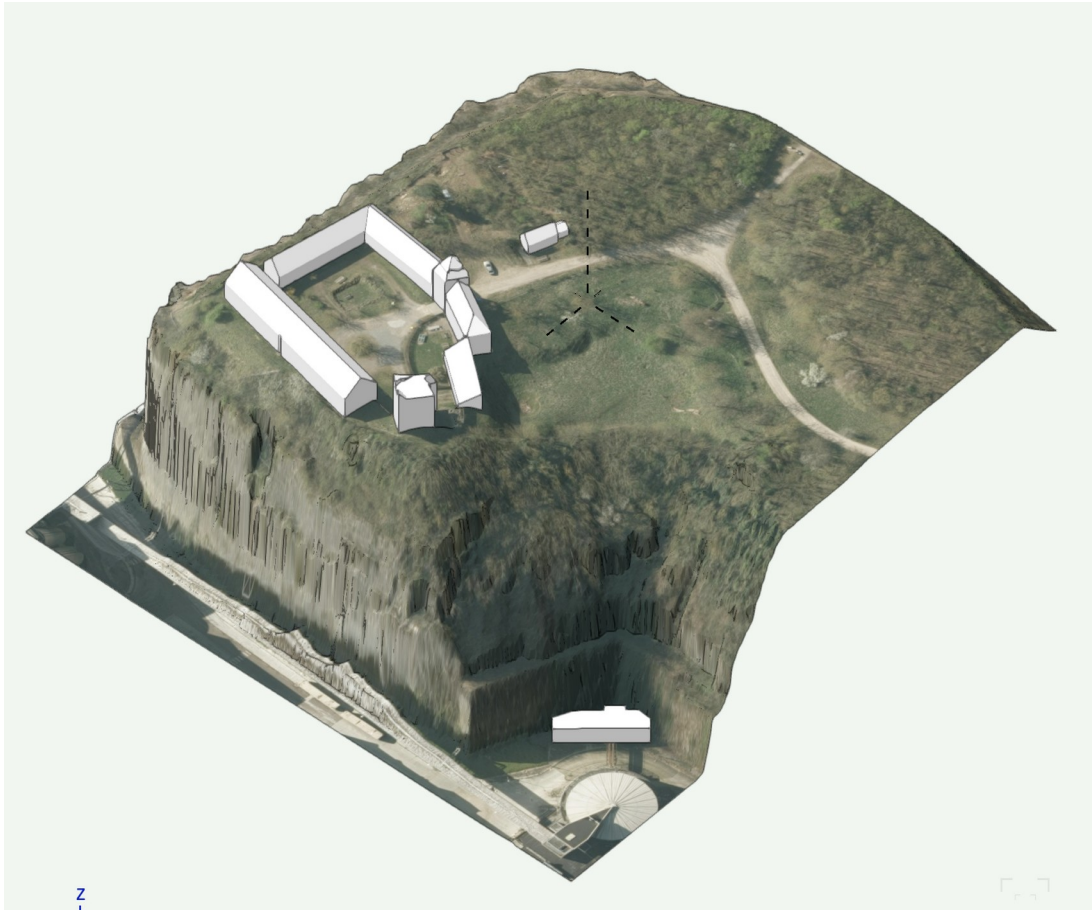
1. Choose AHN LiDAR Point Clouds in the source list.
2. Choose Latest available per tile, or check one or more explicit generations. Select a generation row to show its native deliveries in the lower list, then check the deliveries you need.
3. Choose a destination folder. Optionally enable Draw downloaded tile grid on the active design layer, then start the download.

Latest available per tile selects the best available native 1 × 1 km file for each tile. Explicit generations let you choose a specific delivery; selecting several generations can download overlapping files. Review the warning before continuing.

Every intersecting source tile is downloaded in full, so the download can cover more than the selected rectangle. Each run creates a separate job folder containing the native files and placement information.

Import the files manually with File > Import > Import Point Cloud and use metres as the import unit. Vectorworks supports a maximum of 100 million points per point-cloud object, so import large tile sets as separate objects.

The optional tile grid is locked and provides a placement reference. If the drawing uses local coordinates, set the Vectorworks user origin to the required RD position before importing the point cloud. The plug-in warns about a mismatched user origin but never changes it.

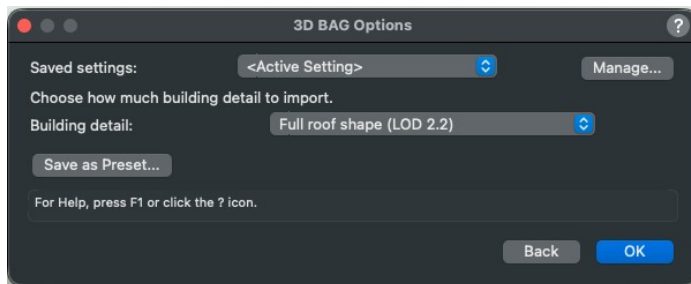


3D BAG Building Imports

Use 3D BAG Buildings when you need building massing or roof geometry. The plug-in creates one mesh per building or city object and places it in class PDOK-3DBAG-Gebouw. Each imported mesh also carries the available BAG object data for inspection in the Vectorworks Data pane.

Detail options

- **Block model - LOD 1.2.** Simple building volumes and faster imports.
- **Block model with roof edges - LOD 1.3.** Block models with additional roof-edge information.
- **Full roof shape - LOD 2.2.** Most detailed roof form. This is the default.



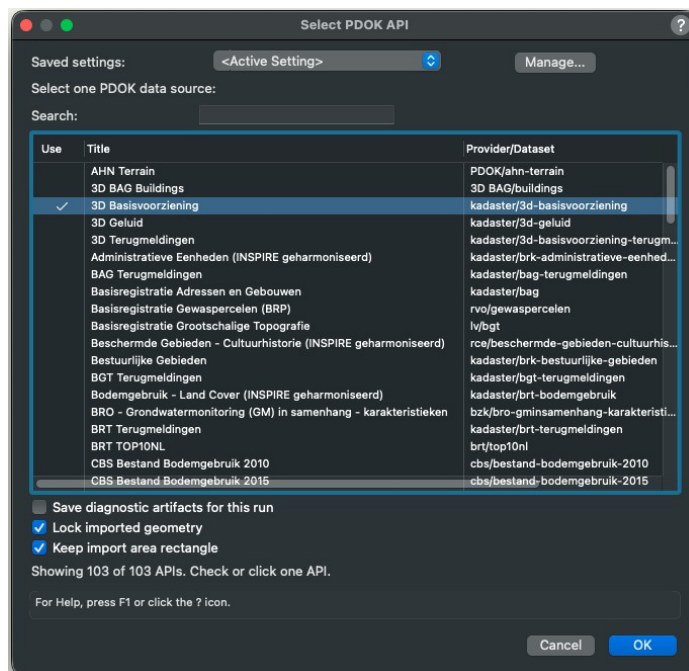
The plug-in counts buildings before importing. It warns above 500 buildings and gives a stronger warning above 5,000. You can continue or cancel; large imports take longer and can be stopped from the progress dialog.

Where they are supplied by 3D BAG, courtyards, light wells, passages, and similar openings are cut into the building surfaces. The finished dialog reports any openings that could not be created.



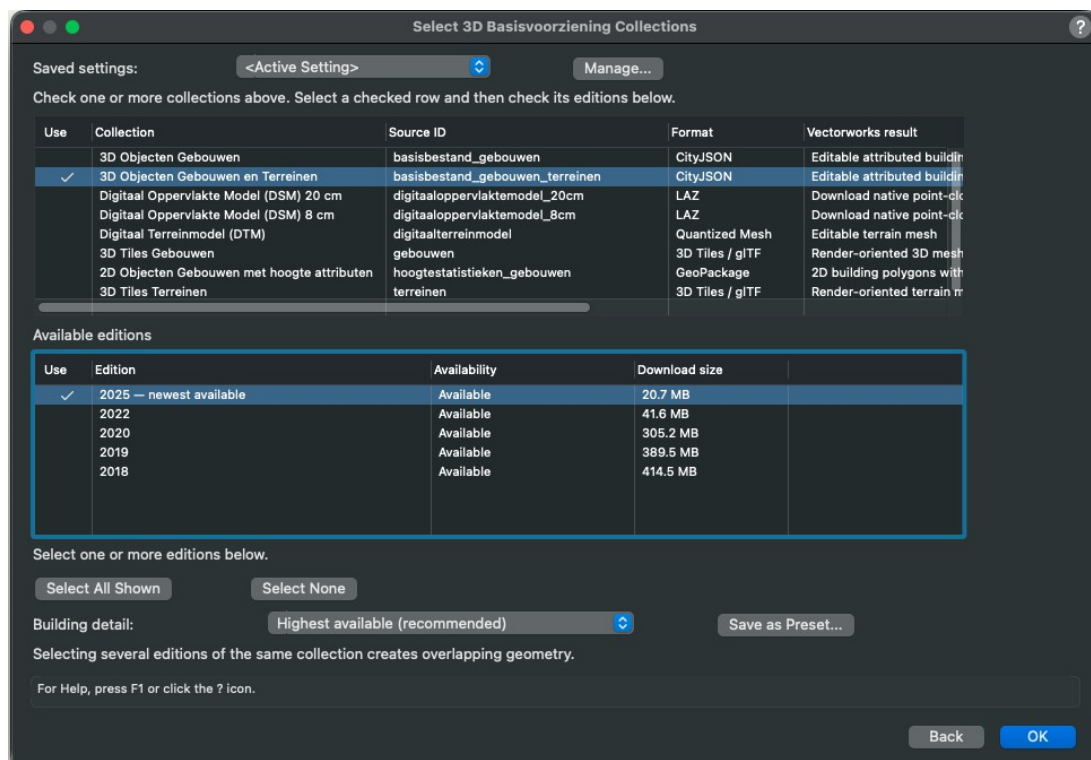
3D Basisvoorziening Imports

3D Basisvoorziening contains several building, terrain, and point-cloud products. Choose the result that matches how you want to use the data in Vectorworks.



Choosing collections and editions

1. Choose 3D Basisvoorziening in the source list.
2. Check one or more collections that are available for the selected area.
3. Where annual deliveries are available, choose the edition you need. Selecting overlapping years or alternative representations can place multiple objects in the same location. Review the warning before you continue.



Editable CityJSON models

Choose a CityJSON building collection for editable building meshes, or the building-and-terrain collection when you also need editable terrain-related objects. Imported objects receive available source information in attached records and are organized into Vectorworks classes.

Choose Highest available for the best detail offered by each object, or select LOD 1.2, LOD 1.3, or LOD 2.2 when you need a consistent building detail.

Apply BGT-derived colours is available when a CityJSON collection is selected and is off by default. Enable it for a restrained palette based on BGT context. Leave it off to retain the existing Vectorworks class attributes and By Class appearance.

Render-oriented 3D Tiles

Choose 3D Tiles Buildings or 3D Tiles Terrain for current, source-coloured models intended for visual context. The terrain delivery can include roads, water, vegetation, separations, and bridges where those objects are supplied by the source.

Building height statistics

Building height statistics creates flat 2D building polygons with height information in attached records. These are not extruded or elevated objects. Use the records when you need the published height values for schedules, analysis, or later modelling.

Quantized Mesh terrain

Quantized Mesh creates editable terrain clipped to the selected rectangle. Choose one available live terrain level and, if required, a live texture source. Maximum texture resolution divides a large textured area into segments so the imagery remains sharp. Available terrain levels and texture sources depend on the selected area and delivery.

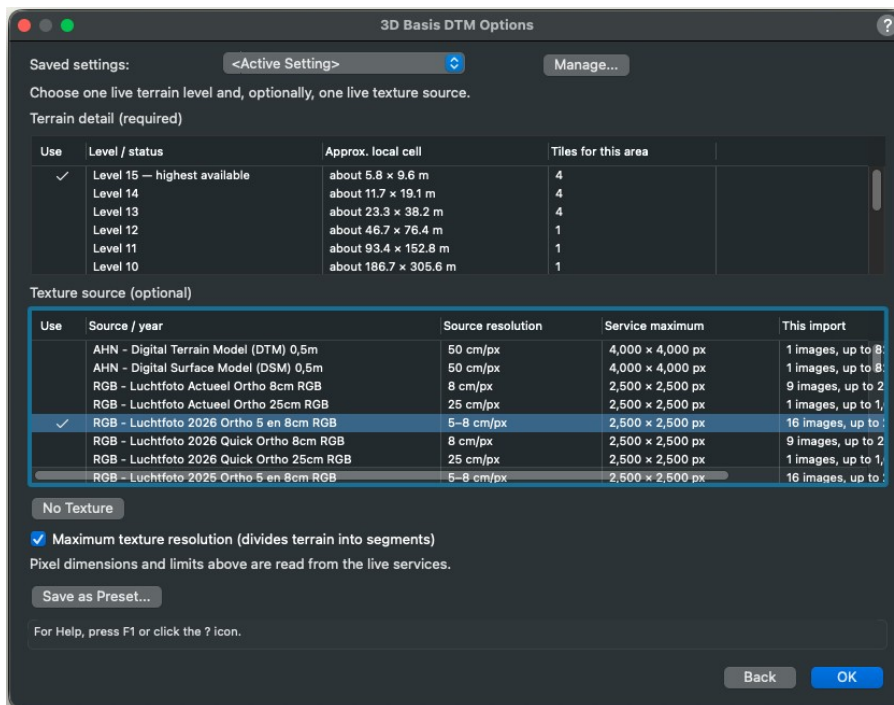
Quantized Mesh tile seams

Tile seams controls how adjoining source tiles meet. No correction (source geometry) is the default: it preserves the published surface and can leave visible gaps between tiles.

Skirts — close gaps, preserve source heights adds downward edge surfaces that hide gaps without moving the source terrain.

Average shared edge heights brings matching tile edges to a common height. It produces a more continuous join but changes the shared edge heights.

Skirts and averaging create unmeasured geometry. The selected treatment is stored in 3D Basisvoorziening saved settings.

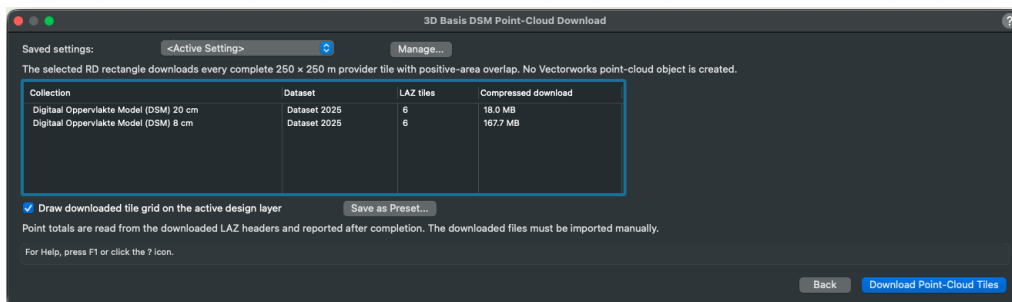


DSM point-cloud downloads

The DSM 20 cm and DSM 8 cm products download complete 250 x 250 m LAZ tiles that intersect the selected rectangle. Choose a destination folder. The plug-in creates a job folder and can add a locked tile grid to the Vectorworks document for placement reference.

Review the warning before starting a large download.

Import the downloaded LAZ files manually with File > Import > Import Point Cloud. Use the tile grid and placement information to align the imported point clouds. If your drawing uses local coordinates, set the Vectorworks user origin to the RD position needed for the point-cloud import; the plug-in does not change the user origin.



Diagnostics

Diagnostic artifacts are available for 2D OGC API Features, AHN Terrain, AHN LiDAR Point Clouds, 3D BAG Buildings, and 3D Basisvoorziening workflows.

- Enable Save diagnostic artifacts for this run in the source dialog before choosing a source.
- Choose a folder when prompted. Cancelling the folder prompt cancels the import.
- With diagnostics off, the plug-in keeps messages concise. With diagnostics on, dialogs can include technical details. Every workflow, including 3D Basisvoorziening, writes its own run report with timing, version, georeferencing, and import-area information. Keep this report and send it when support asks for diagnostics. The report does not include the document name, Vectorworks serial

number, or local file paths. A 2D import can also write collection data and style reports. Full feature dumps are disabled by default.

Editing Imported Objects

Imported objects are locked by default when Lock imported geometry is enabled.

- Select imported geometry and choose Modify > Unlock to edit it.
- Turn off Lock imported geometry before importing, or store that choice in a saved setting, when you frequently need editable output.
- Imported geometry is ordinary Vectorworks geometry, not a live link to PDOK, AHN, 3D BAG, or 3D Basisvoorziening. Downloaded LAZ and COPC files remain external files until you import them manually.

Troubleshooting

- **Document is not georeferenced.** Enable georeferencing for the document or active design layer and select Amersfoort / RD New (EPSG:28 992).
- **Document uses another coordinate system.** Switch the document coordinate reference system to Amersfoort / RD New.
- **RD position could not be established.** Check the document or layer georeferencing. Unlock a survey point first if it controls these settings.
- **Drawing coordinates do not match RD.** This is supported; the import uses the georeferencing.
- **Import area is outside the Netherlands.** Draw an area that overlaps the Netherlands.
- No rectangle selected. Choose Yes to draw the import area, or select a usable rectangle before running the command.
- **Screen Plane rectangle.** Move or redraw the rectangle on the Layer Plane or a horizontal 3D plane.
- **Rotated Top/Plan view.** Turn off Rotated Top/Plan view before starting the import. A document georeference turned relative to north is supported; Rotated Top/Plan view is not.
- PDOK service timeout or server error. Read What went wrong in the error dialog. Draw a smaller area, split the area into several imports, untick dense collections, or try again later. Enable diagnostics when support needs the technical details.
- **Source is Temporarily unavailable.** The service is listed by the provider but is not responding. Choose another available source or try again later.
- **AHN LiDAR files do not overlap the selected area.** Return to the options and choose another generation or delivery, or select a different area. Several explicit generations can contain overlapping tiles.
- **Large 3D BAG import.** Review the building count and warning, then continue or cancel. You can stop a running import from the progress dialog.
- **3D Basisvoorziening collection or edition is unavailable.** Choose a collection and edition shown for the selected area. Availability can differ by location and delivery.
- **Overlapping 3D Basisvoorziening geometry.** Import one year and one representation at a time, or place alternatives on separate layers and control their visibility.

- **Large 3D Basisvoorziening download.** Review the warning and reduce the selected area or number of collections when you do not need the full download.
- **Point cloud is not in the expected position.** Import the LAZ or COPC files with File > Import > Import Point Cloud and use the supplied tile grid and placement information. Set the user origin for RD placement when your drawing uses local coordinates.
- **Quantized Mesh terrain level or texture source is missing.** Choose one of the live options shown for the selected area and edition. Not every delivery offers the same terrain levels or textures.
- **Quantized Mesh shows gaps between tiles.** Choose Skirts to close the gaps without moving source heights, or Average shared edge heights for a more continuous join. No correction preserves the source geometry.
- **License error.** Install or refresh the supplied STB-VW Tools licensing files and restart Vectorworks.

Support & Contact

For the quickest assistance, use the support page and contact form:

- **Support Page & Contact Form:** <https://stb-vw.com/support>
- **Email:** support@stb-vw.com

Tip: If diagnostics were enabled, attach the run report. Otherwise include your Vectorworks version, operating system, plug-in version, and selected data source.

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