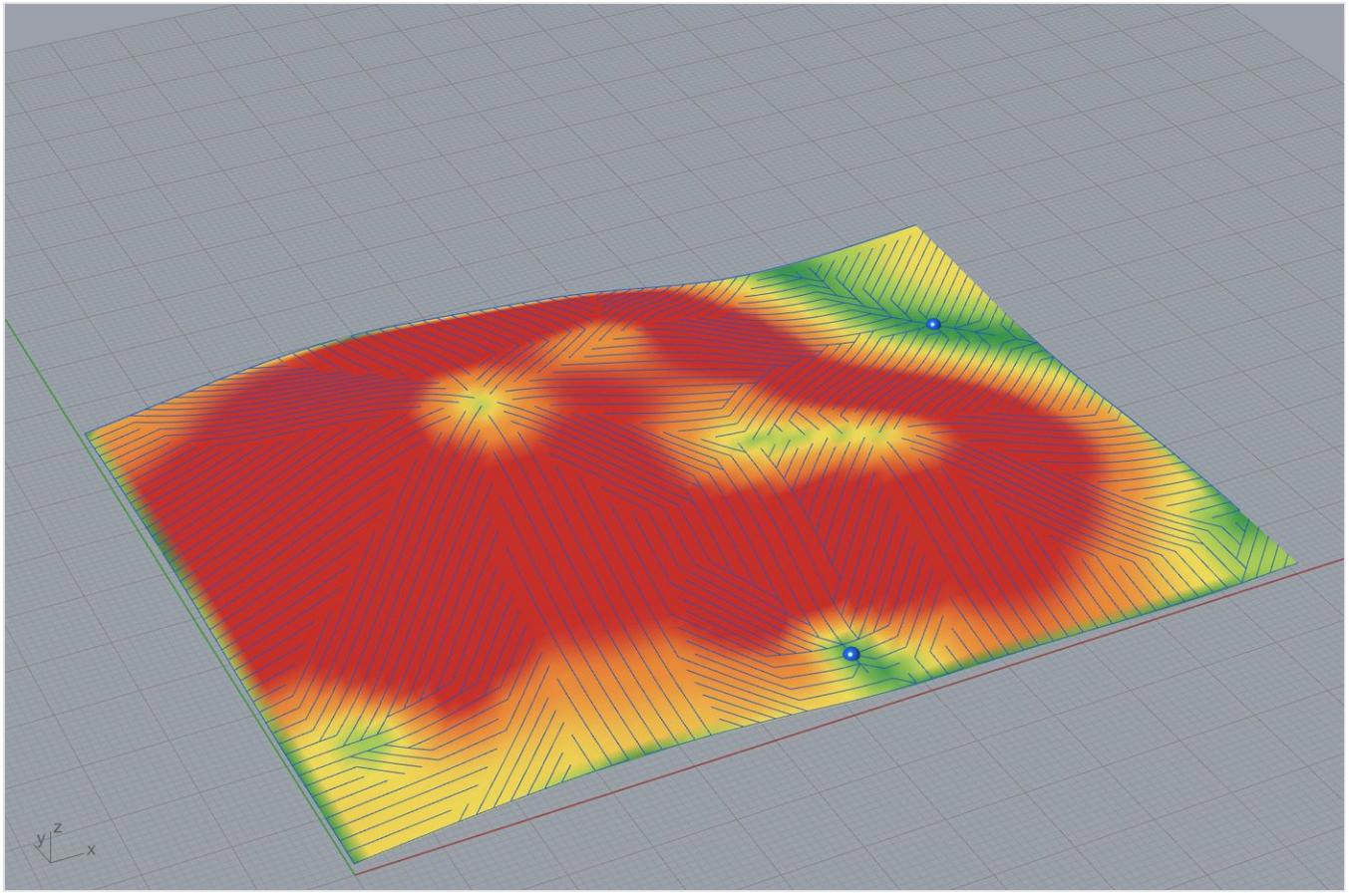
SITE AND MODELS

# WATER FLOW AND SLOPES

Drainage network, ponding points and slope classes on any terrain



FREE | RHINO 7 · RHINO 8 | NATIVE COMPONENTS ONLY | VERSION 1.0 · NOVEMBER 2026

The terrain is sampled on a grid; every node drains to the steepest of its eight neighbours (the D8 method), which draws the drainage network. Interior nodes with no lower neighbour are ponding points. A slope map colours the site in four classes useful for design.



Free to use in your own projects, commercial ones included. Please do not resell or re-upload the files: share the link instead.

# HOW TO USE

1. Open the file: a sample terrain appears with flow lines and slope map.
2. Right-click 'Terrain' > Set one Surface and pick your terrain.
3. Set the cell size: smaller is more detailed and slower.
4. Read 'Site data': number of sinks and share of each slope class.
5. Bake 'Flow network' and 'Slope map'.

# BAKE

Flow network | Slope map

# GOOD TO KNOW

- Slope classes: 0-5% (accessible paths), 5-8%, 8-20% (lawns), over 20% (steep).
- A quick reading of the surface, not a hydrological study.


Free to use in your own projects, commercial ones included. Please do not resell or re-upload the files: share the link instead.

# INPUTS

| PARAMETER | RANGE | DEFAULT |
|---|---|---|
| Cell (m) | 0.50 – 10.00 | 2.00 |

# GEOMETRY YOU CAN REPLACE

Terrain · Surface

# RESULTS AT DEFAULT VALUES

SITE DATA

```
Nodes: 2806 (cell 2 m)   sinks: 2
Slope 0-5%: 8.9%   5-8%: 5.1%   8-20%: 20.0%   >20%: 66.0%
```


Free to use in your own projects, commercial ones included. Please do not resell or re-upload the files: share the link instead.

# INSIDE THE DEFINITION

STAGES, LEFT TO RIGHT AND TOP TO BOTTOM

**1** INPUT

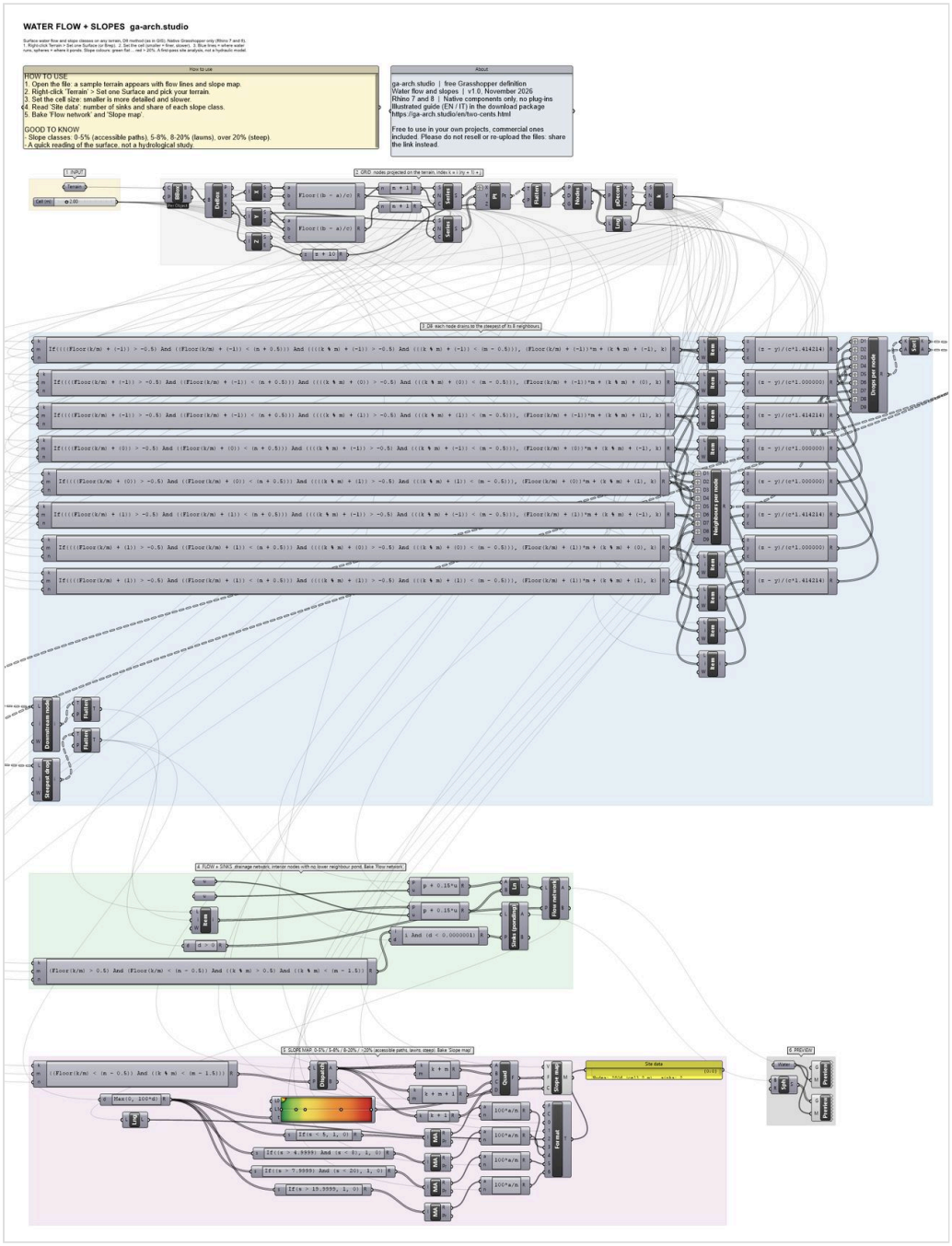
**2** GRID nodes projected on the terrain, index k = i (ny + 1) + j

**3** D8 each node drains to the steepest of its 8 neighbours

**4** FLOW + SINKS drainage network; interior nodes with no lower neighbour pond. Bake 'Flow network'

**5** SLOPE MAP 0-5% / 5-8% / 8-20% / >20% (accessible paths, lawns, steep). Bake 'Slope map'

**6** PREVIEW






Free to use in your own projects, commercial ones included. Please do not resell or re-upload the files: share the link instead.