



# STAMP PACKS

By Procedural Worlds

Stamp Packs extend the capabilities of Gaia by adding additional terrain shapes to the Gaia stamper and the World Designer.

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## About Procedural Worlds

Powerful, simple, beautiful. Friendly tools, gorgeous games!

Procedural Worlds empowers artists and developers to bring their vision to life by making it easy to create beautiful worlds. Leverage the latest procedural generation techniques to take the pain out of creating stunning environments and focus on creating amazing games.

The only end to end environmental generation and delivery suite:

[Gaia Pro 2021](#) - A world generation system for creating, texturing, planting, and populating scenes from low poly mobile, VR and through to high end desktop.

[GeNa Pro](#) - A sophisticated localised level design tool that augments Gaia's broad-brush strokes, by working intuitively to give fine grained control.

[SECTR](#) - A suite of performance-enhancing tools that enable open world streaming, massive mobile games and includes the latest techniques in audio occlusion and propagation.

[Ambient Sounds](#) - Lets you configure music and sounds to create a unique atmosphere for each region in your game, which can react to changes in your gameplay instantly.

[Pegasus](#) - A cut scene and fly through creator that makes it easy to show off gorgeous environments and drive characters through scenes with localised avoidance and Mecanim animation support.

Spawner Packs – You can save time by using our pre-configured Procedural Worlds Spawner packs (PWS). The packs contain configurations for our tools Gaia and GeNa and are designed to work with popular asset packs from the Unity Asset Store. Currently available:

[PWS – POLYGON Fantasy Kingdom - Spawner Pack](#)

[PWS – POLYGON Nature - Spawner Pack](#)

[PWS – SUNTAIL Fantasy Village – Spawner Pack](#)

Micro Biomes – A collection of assets with fitting spawners and biome settings for GeNa & Gaia.

[Micro Biomes - Fields of Color](#)

[Micro Biomes – Deep Desert](#)

NEW! Canopy community

Find support and tutorials for the above products and discuss game development with other Procedural Worlds users. Join us at <https://canopy.procedural-worlds.com/>!

## Introduction

Thanks for purchasing a Procedural Worlds Stamp Pack!

With this Stamp Pack you own a collection of high-quality stamp images that you can use both in the Gaia Stamper and in the Gaia World designer. It is also possible to use these stamps without Gaia at all with the brush tools in the terrain inspector. This document details how you can use your new stamps with these different methods.

Please Note: This is a generic document that is the same across all Stamp Packs – all Stamp Packs work the same way, the only thing that changes are the type / category of stamps being added. If you read this document already in another Stamp Pack, there is nothing new here.

## Prerequisites

There are no prerequisites to install the stamp pack – if you plan to use the stamps in Gaia, you will need to have Gaia installed of course. The stamps work both with the Pro- and non-pro versions of Gaia.

## Render Pipeline Compatibility

The stamp images have no dependencies to the render pipelines and can be used the same across all render pipelines. If you are using Gaia, make sure Gaia is setup correctly for the render pipeline you are using in the “Setup” tab in the Gaia Manager (more info on this can be found in the Quickstart Guide in the Documentation folder of your Gaia installation).

## Installation

You can download the package from the package manager from the “My Assets” section like any other asset purchased from the asset store.

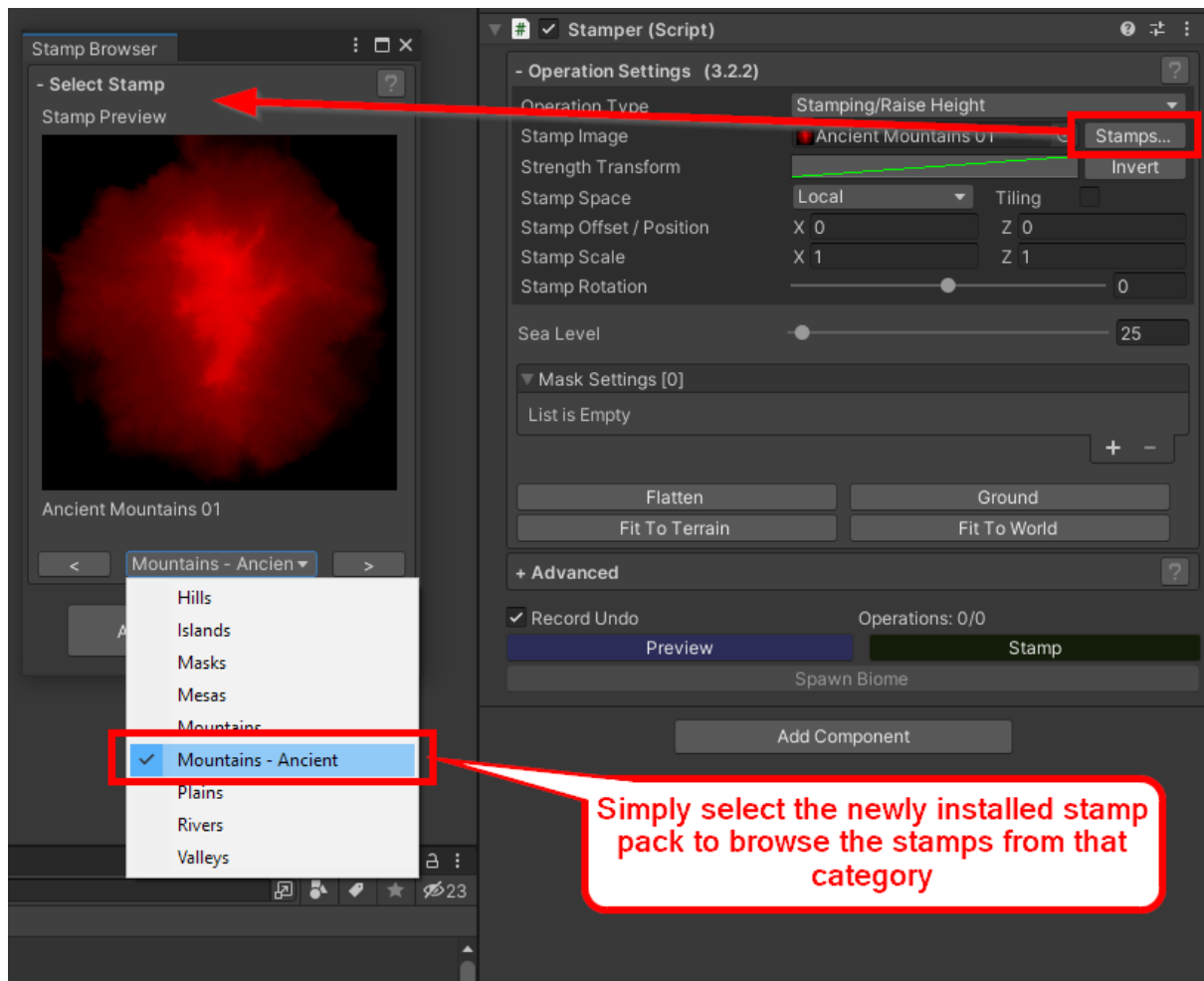
The stamps will install themselves into the directory

Assets\Procedural Worlds\Gaia\Stamps\

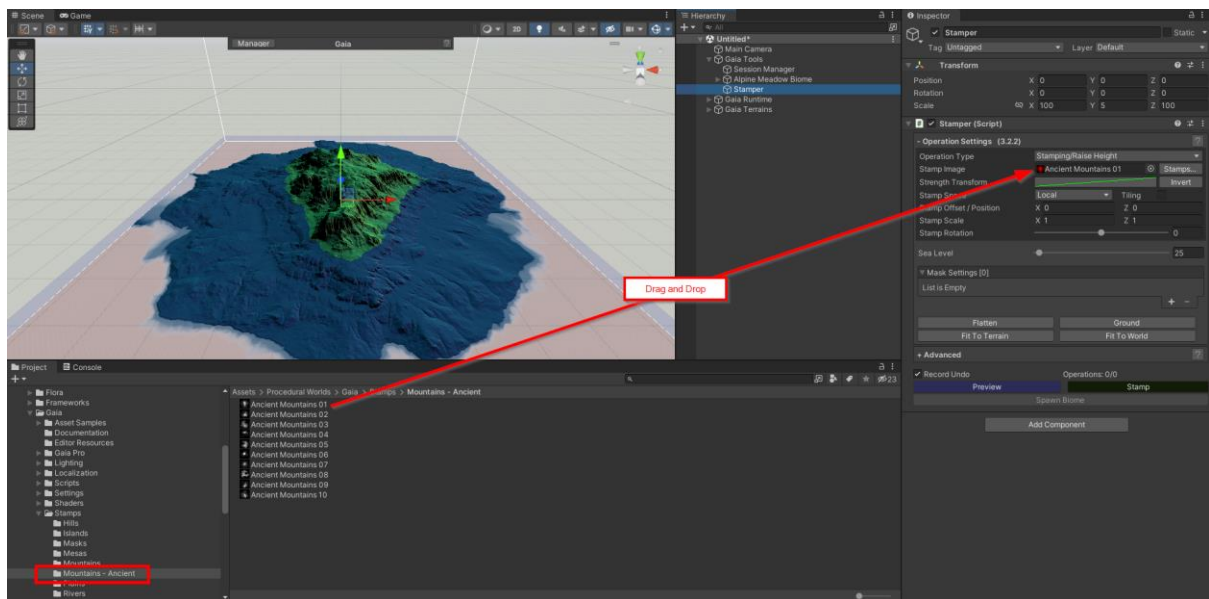
## Using the Stamps

### In the Gaia Stamper

To use your new stamps in the Gaia Stamper, simply select one of the new stamp categories for the stamp browser:



You can of course also drag and drop stamp images from the project hierarchy into the stamper directly:

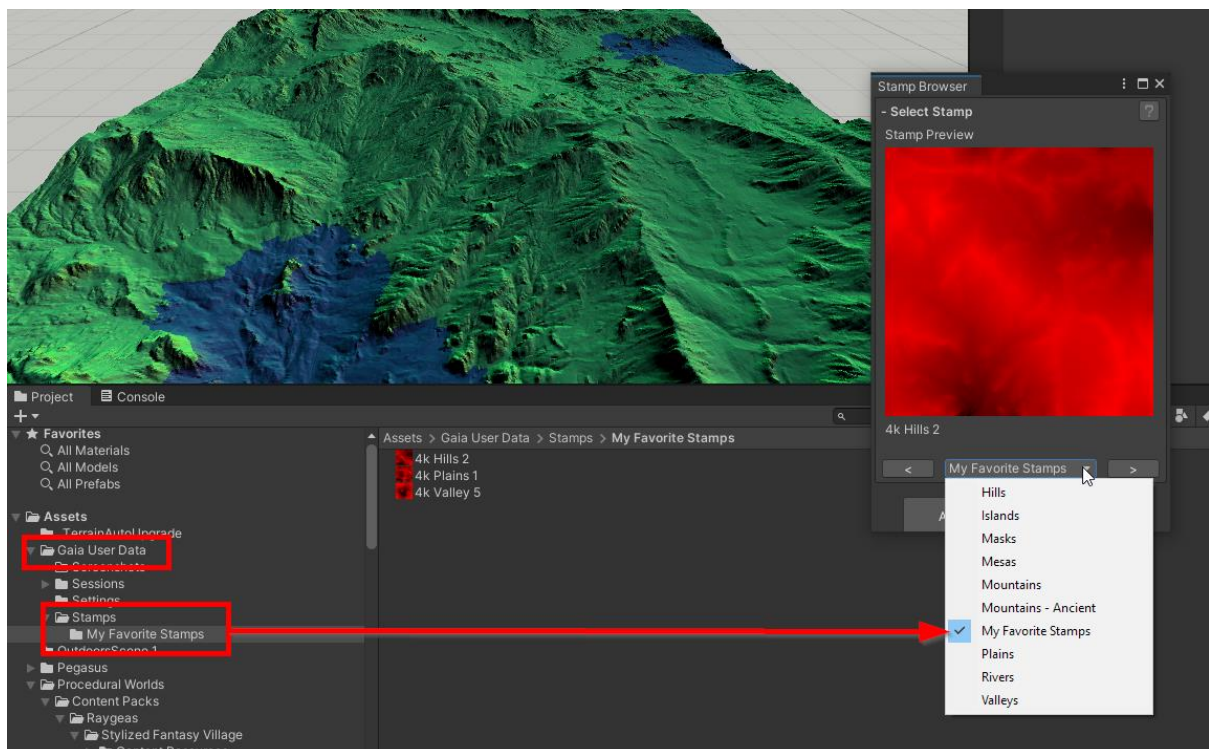


The new stamps behave exactly like the ones that come with the Gaia installation, so with the new stamp selected you can just continue to use the stamper as you are used to.

Pro Tip: The stamp browser also displays folders that you create under

Gaia User Data\Stamps

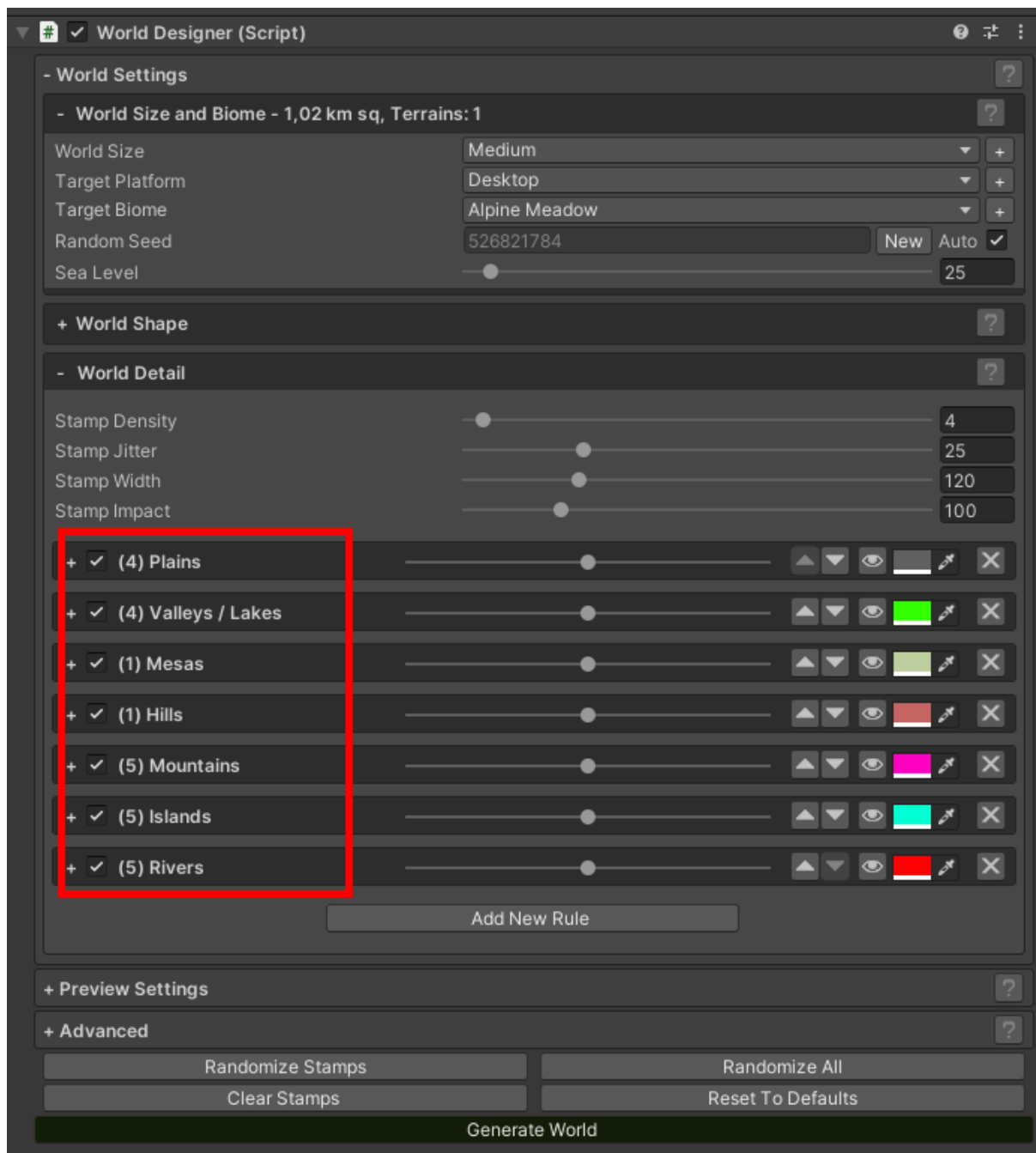
In this way you can create special folders with your own stamp collections that you can copy / reorganize from the existing stamp folders:



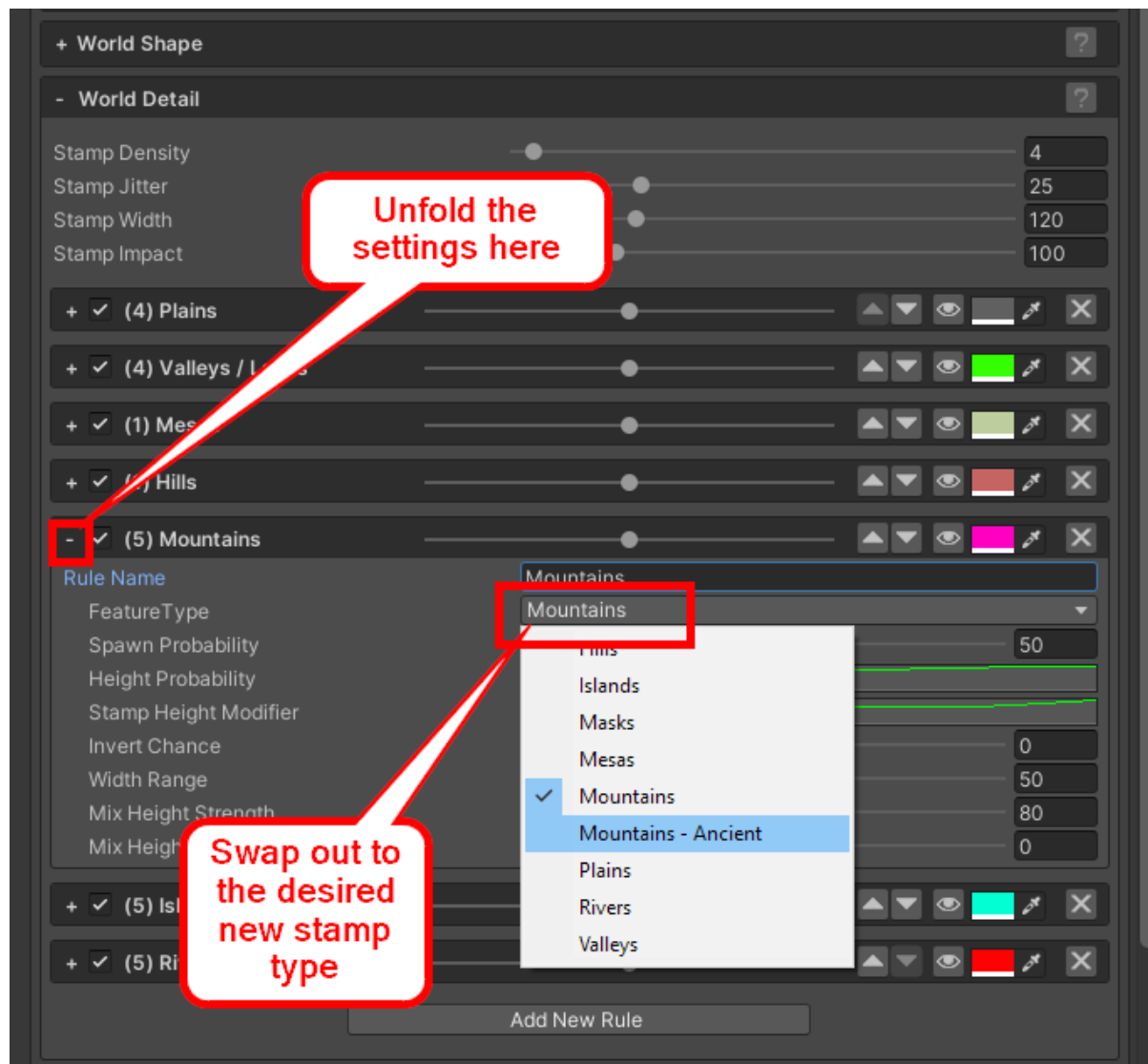
## In the World Designer

The Gaia World Designer also uses Stamp images in the background to assemble its terrains. You can add the stamps from your stamp pack so you can see features from these stamps on your generated terrains, or you can influence the entire look of the generated output by setting the chances that a certain stamp type appears in the output.

You can find the different stamp types in the “World Detail” section of the World Designer. Each entry here represents one type of stamps from the stamp folder that will be used for generating the output.



The easiest way to get your new stamps to appear, is to swap an already existing category to use your new stamps instead. To do so, open the rule, and simply select a new Feature Type:



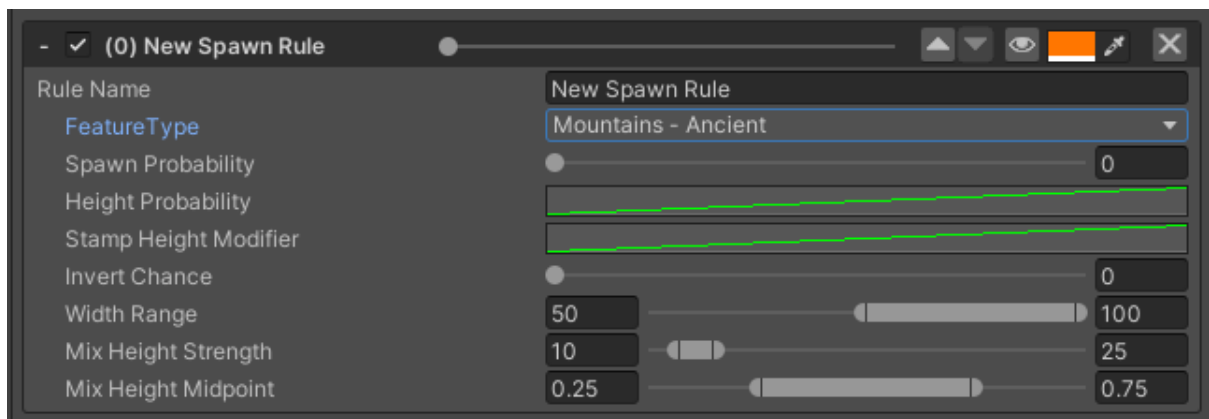
When you do generations now, the world designer should use the stamps from the new folder instead for the output. Depending on which category you used, and how the probabilities are for such a stamp to appear, you might not always see your new stamps on the terrain for each generation result (E.g., when no instance of your category was spawned, you can see the number of stamps on the output in the brackets () before the category name).

The more complex way of adding in your stamps is to create a new rule to add your new category as an independent new feature in the output. To do so, click on the "Add New Rule" Button at the bottom.



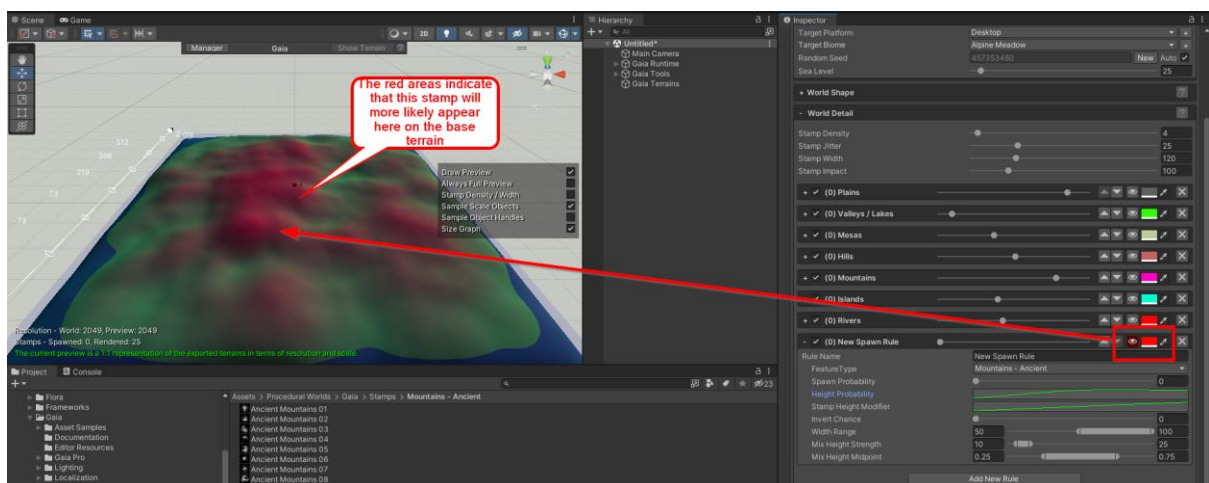


This creates a new feature for you to maintain. Select the Feature Type to use the stamp folder from your newly installed pack, then configure the following parameters:



Spawn probability – This is the same slider as in the list display and influences the overall chance that a stamp of this feature type will be selected.

Height probability – how the height of the base terrain will influence the chance of the stamp to appear (left side of the curve = minimum height, right side = maximum height). Note that you can activate the visualization with the eye icon to see the impact of this setting directly in the preview.



Stamp Height Modifier – controls how the underlying height of the base terrain at the spawn spot will influence the height of the spawned stamp. For example, if a mountain stamp would be drawn for spawning at a beach, it should receive only reduced height to not fully destroy the underlying base terrain shape.

Invert Chance – Chance the stamp will spawn inverted (A valley instead of a mountain)

Width Range – the possible width range for the stamp when spawning

Mix Height Strength – Stamps are spawned using the “Mix Height” operation to blend in well with the already existing stamps. This slider controls the minimum and maximum strength for this operation according to the Stamp Height Modifier above)

Mix Height Midpoint – another setting from the “Mix Height” operation. This setting controls whether the features found on the stamp should be elevated above the terrain, or rather should cut down into the terrain.

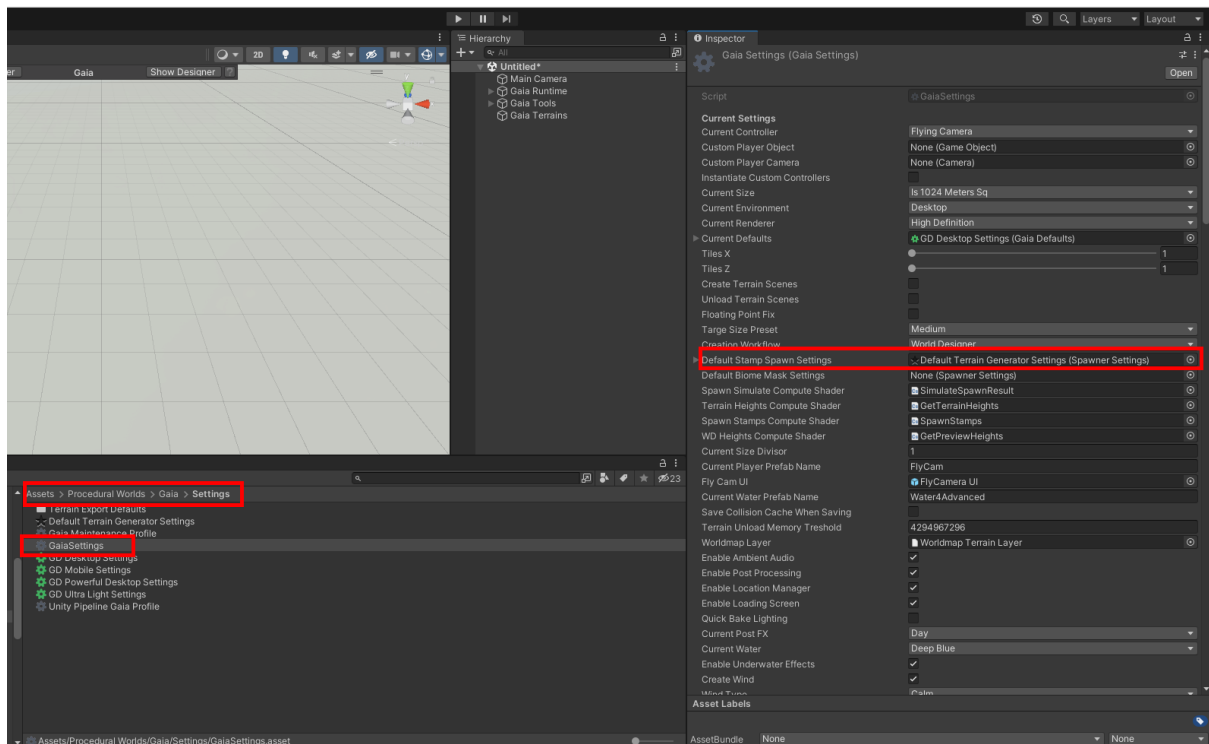
The more the slider range is to the left, the more this operation will use the stamp to elevate features above the terrain (Which you would want for mountain-like stamps) The more it is set to the right, the more it uses the features in the stamp to lower the terrain (Better for valleys, rivers, lakes).

It is recommended to turn off all other stamp types while developing these settings, so you get an idea how those settings impact the output and you can assure the stamps come out in a good size and shape for your generation.

If you are happy with your world designer settings, please note that it is possible to save and load world designer settings from the advanced tab:

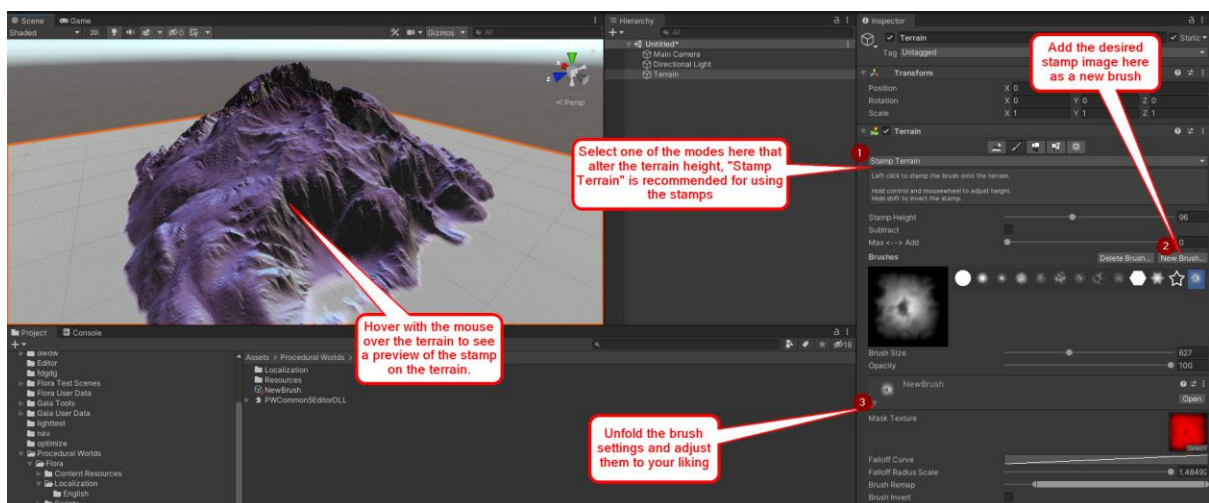


The Gaia settings object also has a slot for the default settings that should be used for the world designer – if you make a setup that uses all your favorite stamps, you can configure Gaia to always use those settings instead when opening the world designer:

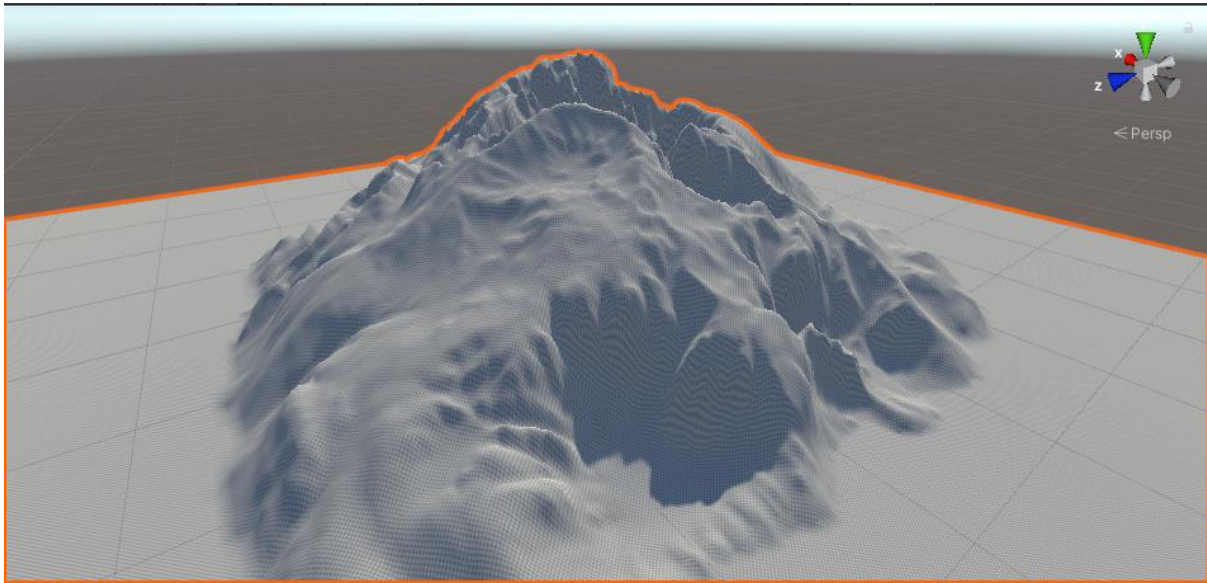


## Using the stamps with the Unity Terrain Inspector

It is also possible to use the stamp images without Gaia at all directly in the Terrain Inspector. To do so, select the terrain and select the “Paint Terrain” tab in the inspector. Select one of the modes that alter the terrain heightmap (Recommended: “Stamp Terrain”) and add the desired stamp as a new brush. You can edit the brush setting, stamp height etc. to your liking. When you hover the mouse over the terrain in your scene view, you can see a preview:



When you then click on the terrain, it will stamp the shape onto your terrain:



Please note that the terrain inspector is only a rudimentary replacement over the Gaia stamper and can e.g. not rotate the stamp images per default.