StampIT! Collection

Version 1.2

About this Document

Please find the most recent documentation online at:

https://bit.ly/stampit-doc

Product Overview

The StampIT! Collection for Unity consists of high quality terrain heightmaps in high 4K resolution which can be used for blending landscape features on the Unity terrain.

About Stamping

Stamping is a very common process which has existed for a very long time in all kinds of software. In its core a stamp is a heightmap, so is the Unity terrain, both are images. You can think of stamping as blending multiple images over each other, similar to e. g. blending images in applications like Photoshop, Krita, Gimp or any other image software that supports blending. There's nothing special to it. The "special" is rather in the eye of the user in the way those images are blended together: replace a heightmap area with the stamp brush, add to the heightmap, subtract from it and so on.

Unity Terrain Stamps

Unity has a means for stamping heightmaps on the terrain with their own terrain tools. Either the built-in tools or the excellent tools that you can download via the package manager.

You can read about it here:

https://docs.unity3d.com/Manual/terrain-StampTerrain.html

Or here:

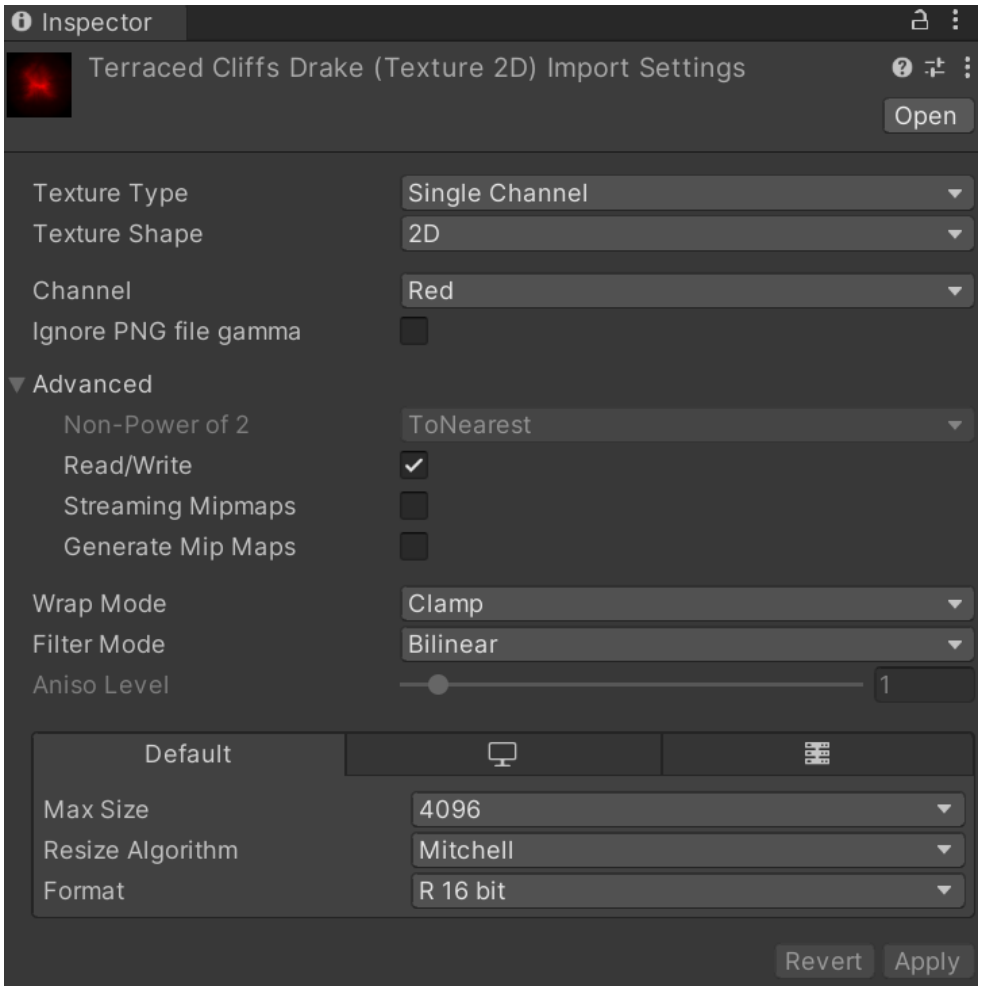
https://docs.unity3d.com/Packages/com.unity.terrain-tools@4.0/manual/index.html

Or you could also use 3rd party assets which support those kinds of features in their own way. But in the end it's the same for all of them: blending of images.

Importing Heightmaps

The StampIT! Collection comes with high quality heightmaps, i. e. textures in 4K resolution and with predefined Brushes. You can easily create a brush on your own with your personal preferences.

The textures for the stamps can be imported with these settings into Unity:



Please keep in mind that 16 bit is important, otherwise you'd get a much too low resolution on the stamps.

Installing Brushes for Unity's Terrain Tools

In order to use the brushes in the Unity Terrain Tools palette please navigate to the brushes folder and unzip the archive that's in there.

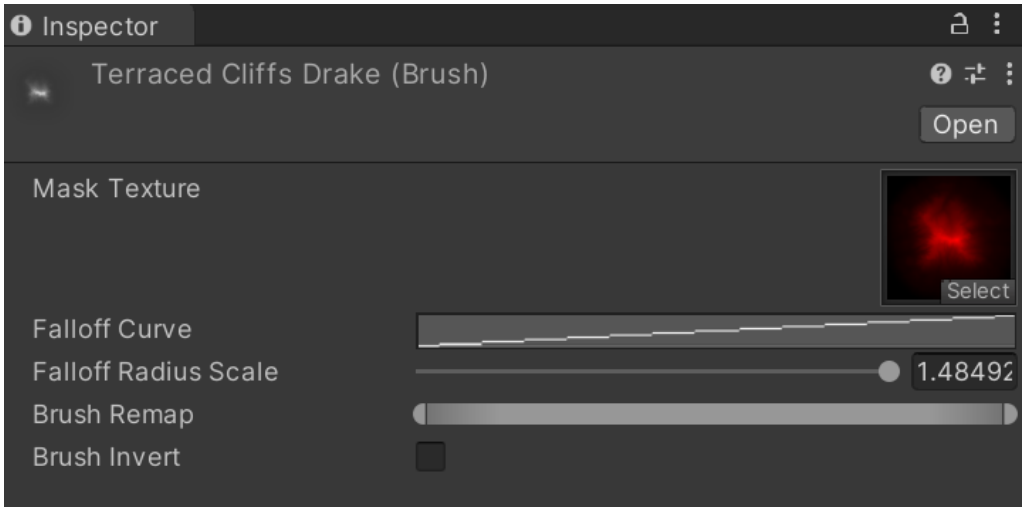
Unity's Terrain Tools load all of the heightmaps of the palette into memory, even those which you don't actually use. This may become an issue if you are low on memory or if you have hundreds of stamps installed. I had to make the tough decision to zip the brushes in order to avoid running out of memory when you simply click on the terrain gameobject after you installed all of the stamps of my Ultimate StampIT! Collection. Until Unity fixes their memory issue:

Please unzip the archive in the Brushes folder of the stamp asset you intend to use. Easy as that.

This is only a limitation of Unity's Terrain Tools, not with other assets like MicroVerse. Install MicroVerse and you're good to go with the Content Browser. No further steps necessary.

Creating Brushes

The brushes can be created by choosing `Create > Brush` in the project menu and applying these settings:



This is a brush which can be used for stamping on the Unity terrain.

Brushes (i. e. stamps) are registered automatically with the Unity terrain tools. Unity searches for those brushes when you open the terrain settings in the inspector. Those brushes are then visualized in the brushes palette.

Here's the Unity documentation about brushes:

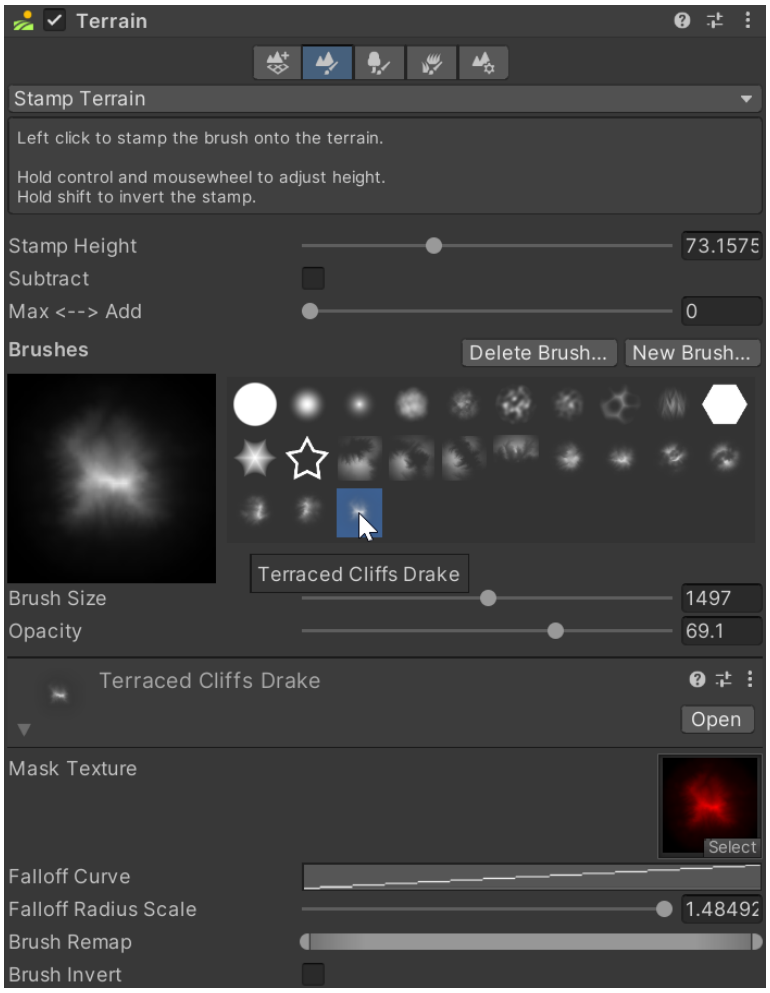
https://docs.unity3d.com/Manual/class-Brush.html

The setting that might be of most interest is the falloff and radius scale. Images are rectangular by nature, with those falloff settings you can change the blending in a circular fashion, in order to get a smooth blend instead of hard edges in case the texture is a complete terrain heightmap. What you decide to choose is your artistic freedom.

Stamp Terrain

Using a brush on a Unity terrain as a stamp is very convenient with the built-in tools: Just select the terrain in the inspector, activate the “Paint Terrain” tab and switch to “Stamp Terrain”. Select a brush, set size, height and opacity and paint with it.

Here’s a screenshot of the terrain inspector:



As you can see you can also adjust the brush settings directly within the palette.

Note on the terrain tools: It's highly recommended to update the built-in terrain tool to be using the new terrain tools from the Package Manager. With the new terrain tools it's very easy to paint additional artistic touches with sculpting tools, noise, effects, erosion and so on.

MicroVerse Compatibility

The asset is compatible with MicroVerse.

The heightmaps will be visible in the Content Browser of MicroVerse and will be usable from there.

Frequently Asked Questions

Is the brush size limited to 500?

No, that's a unity default. If you want a higher maximum than the default 500, just open the foldout of the brush size and enter your desired minimum and maximum values.

How can I make the terrain more crisp?

The stamps are high resolution. How the terrain looks depends on the settings of your terrain itself. Higher resolution look can be achieved by reducing the pixel error in the terrain settings. The default is 5. You may also want to check the resolution of your terrain heightmap.

Are the stamps limited to the terrain tools asset?

No, the stamps are heightmap images. You can use those in any asset that supports the use of heightmaps.

Are the stamps limited to Unity?

No, you can use the heightmap images also outside of Unity, e. g. in Unreal Engine.

Can I use the heightmaps for anything other than Stamps?

Yes, absolutely. Those stamps are brushes like any other brush in the terrain brushes palette.

The brushes don't show up in Unity's Terrain Tools Palette

Please unzip the archive in the Brushes folder.

High memory consumption when you click the Terrain gameobject

The Unity Terrain Tools load all of the heightmaps of all brushes of your project into memory. This may become an issue with hundreds of stamps. To prevent high memory consumption I put the brushes into archives per asset, so that this won't happen directly after installation. This is only an issue with Unity's Terrain Tools, not with other assets like MicroVerse.