Documentation

Index

Introduction

The important stuff

Position sprite pivots in the bottom left corner. (See **Creating Sprites**)
Naming sprites correctly to avoid more work. (See **Sprite Naming**)

External Resources

YouTube
TileTool2D Playlist Examples and tutorials.

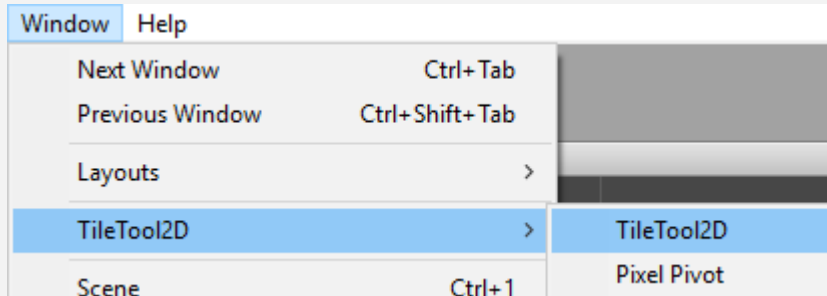## Keyboard Shortcuts

Draw behind: **CTRL + Shift**
Erase: **Shift**
Fix: **CTRL**

TileTool 2D Window

Locating TileTool 2D

Open the TileTool 2D window in the Unity top menu bar *Window > TileTool2D > TileTool2D*

Tile Prefab Drop Down
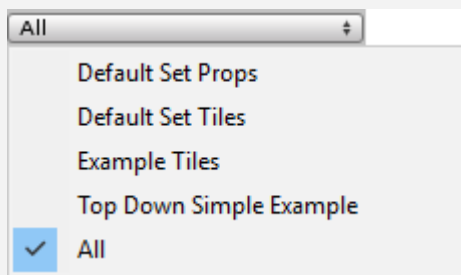
Select which tiles should be visible in the tile selection view.
Tiles are grouped based on their folder location in the project resources.

Preview Scale Slider

Adjust the scale of tile preview images in the tile selection view.

Tile Selection View

Select tiles used while drawing in the scene.
Double click to select the prefab in Project window.

Toolbar

Use the tools in the toolbar to draw, erase, fix or snap tiles.

1. **Draw**   > creates new tiles in the scene.   (Draw behind: **CTRL + Shift**)
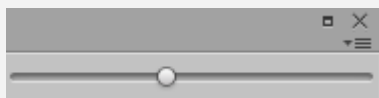2. **Snap**   > is used when moving tiles in the scene.
3. **Erase**   > removes tiles.   (Shortcut: **Shift**)
4. **Fix**   > changes tile based on neighboring tiles.   (Shortcut: **CTRL**)
5. **BoxDraw**   > draw many tiles at once.
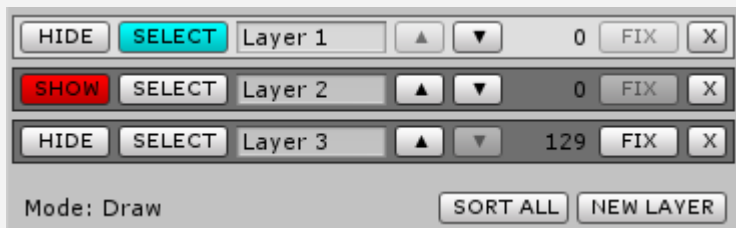6. **BoxErase**   > erase many tiles at once.

Draw, Erase and Fix is used to in scene by clicking and dragging the mouse.
Fix can be used to randomize tiles if there are more than one sprite of that type.
Fix is done automatically when drawing or erasing with the tools.
Fix can be used when tiles are removed without using Erase.

Layer View

Layers are GameObjects that holds the tile sprites.

1. **Hide/Show**   > Disable or enable layer.
2. **Select**   > Layer to edit.
3. **Layer Name**   > Edit layer GameObject name.
4. **Sort**   > Sort layer up or down.
5. **Fix**   > Fix all tiles in layer. (see Toolbar Fix)
6. **Delete**   > Destroys layer GameObject.
7. **Sort All**   > Sorts all layers. (Used if layers are moved in hierarchy view)
8. **New Layer**   > Create a new layer GameObject.
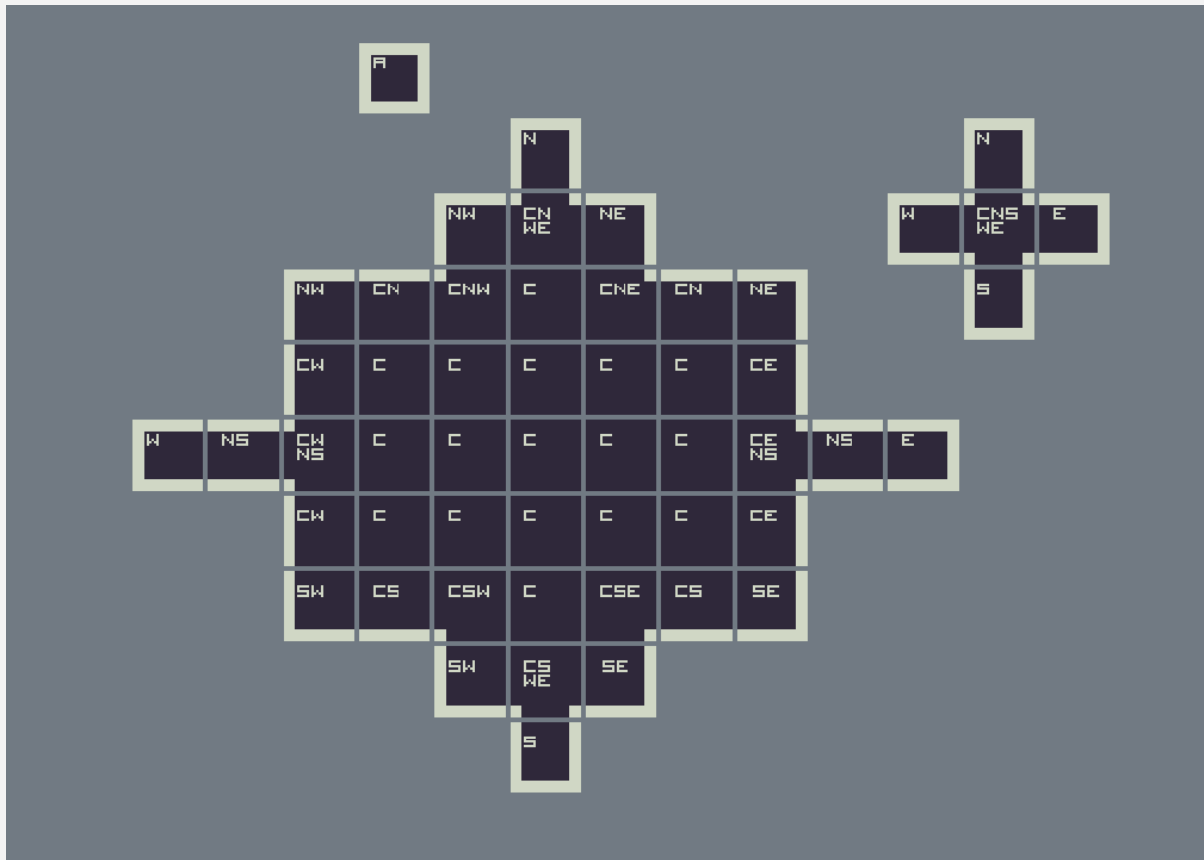
Creating Sprites

Pivot placement

Position the pivot of the sprites in the bottom left corner.
For pixel perfect pivot positions, use the included pivot tool.
(Top menu: Window > TileTool2D > Pixel Pivot)

Sprite Naming

Basic tiles. For advance tiles see the *Tile Naming Example* scene.

Correct sprite naming is required to auto-fill arrays. To avoid having to assign each sprite to the tile prefab, by naming the tiles correctly the tiles can be located by the press of a button.

NAME_SEGMENT TYPE_NUMBER

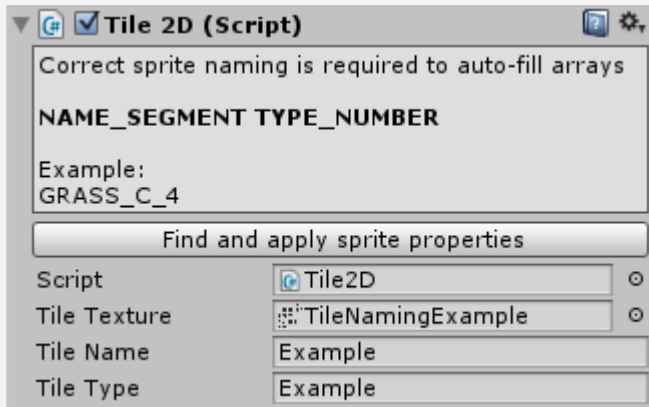|		
GRASS_A	*or*	*GRASS_0 (easy template uses numbers instead of chars)*
GRASS_C	*or*	*GRASS_6*
GRASS_C_1	*or*	*GRASS_6_1*
GRASS_C_2	*or*	*GRASS_6_2*

Numbers are optional. Numbers can be used to randomize a segment type when drawing.
For examples see the Tile Naming Example scene, prefabs and textures.

Tile Prefab

Properties

Tile prefabs contain references to all the sprites used by a TileTool2D tile.

1. Tile Texture   > Select the texture containing the sprites for the tile.
2. Tile Name   > Write in the name used for the tile in the texture.
3. Tile Type   > Tile types blend together with Fix. (See Toolbar Fix)
4. Button   > Automatically assign sprites to the tile. Tile Name must be the same as the sprite naming in the Tile Texture. (See Sprite Naming)
Texture must be in the Resources folder.

For examples see the Tile Naming Example scene, prefabs and textures.

Sprite Arrays
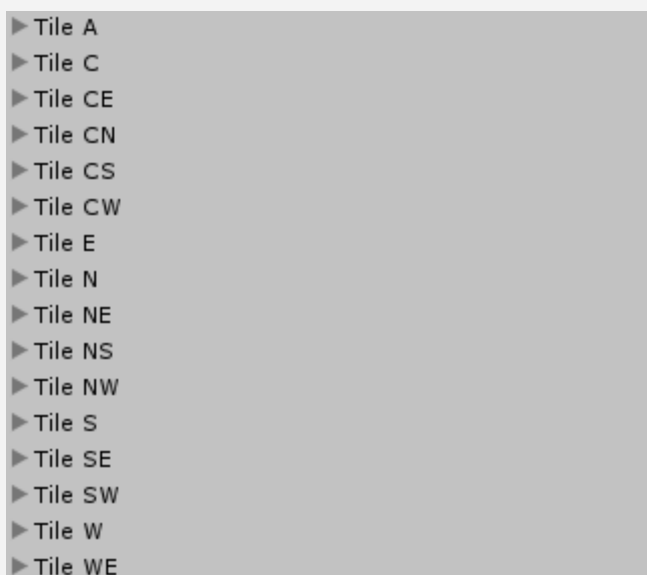
Tile sprites are placed in arrays, it is possible to have multiple versions of the same tiles. Multiple versions will be randomized when drawing.

Tile Size

Script	Tile2D
Tile Texture	TileNamingExample
Tile Name	Example
Tile Type	Example
Tile Size	1

It is now possible to use tiles bigger and smaller than the default 1 unit.
Remember to fill in the Tile Size and change box collider size.

Neighboring Tiles

N Tile	None (Tile 2D)
E Tile	None (Tile 2D)
S Tile	None (Tile 2D)
W Tile	None (Tile 2D)
Nw Tile	None (Tile 2D)
Ne Tile	None (Tile 2D)
Se Tile	None (Tile 2D)
Sw Tile	None (Tile 2D)

Other tiles next to the current tile. These tiles are detected when drawing or erasing.
Used to automatically change the tile sprite.

Tile Attachments
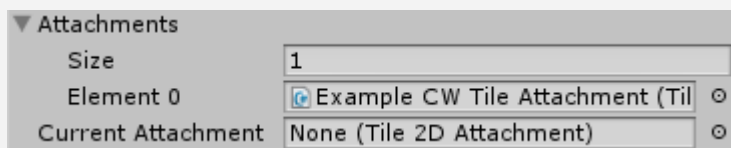
Tile2D Attachment properties
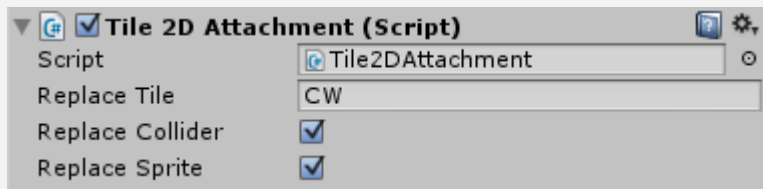
Tile attachments are attached as a child to the Tile GameObject when added to the scene.

1. Replace Tile > What Tile the attachment should be added to.
2. Replace Collider > Disables tile box collider.
3. Replace Sprite > Disables tile sprite.

Add the attachments to the Attachments array.
In this example all CW tiles will have a new sprite and collider.

Easy Template

Easy Template Texture

Easy Template texture and prefab. You can use this texture to easily set up your tiles.

Simply duplicate the texture, scale the texture to your desired texture size in photo editing software. Add your tiles in the appropriate positions based on the template.

Video on how to use the template texture and creating a new tile.
YouTube **https://www.youtube.com/watch?v=PZY9QtqSkIk**
You can use the Easy Template texture and tile to practice this method.

Easy Template numbered sprites also works with the Tile Wizard. (Update 1.4)

Pixel Top Down Example

About

Located in folder: *Assets\TileTool2D\Example Top Down*

This example will be updated frequently. Use it as a reference and help for your own project.
It's preferable not to use the scripts or edit the textures as they will be changed on updates.
Create your own scripts or duplicate the example scripts for your own project.
Only use the scripts in this example to learn how to manipulate TileTool 2D tiles, copy their content, avoid changing them as it will make updating the asset difficult.

Fixing tile edges

Bleeding edges

When a sliced texture has a transparent side, Unity sprites will occasionally render the pixels next to the sliced edge. To solve this issue it is necessary to bleed 1 pixel to the edges of the sprite. A simple way to solve this issue is to make a 4 duplicate layers of the entire texture in Photoshop or other graphic software, move this layer behind the original and move those layers so they fill 1 pixel of the edges. The bleed layers should be merged to save memory. This is a limitation in Unity and should be done once the tile texture is complete and ready for publishing.
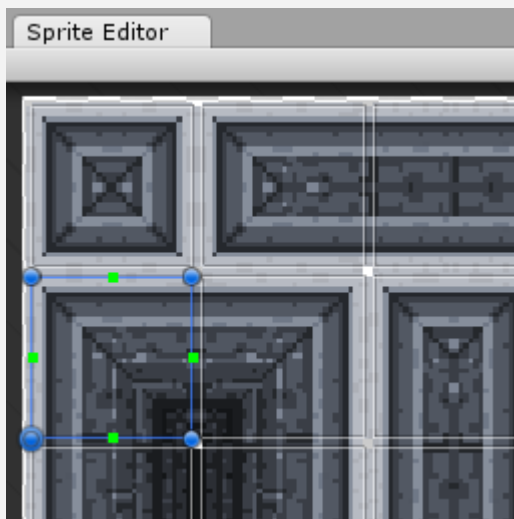
Sprite edge problem in Unity in play mode.
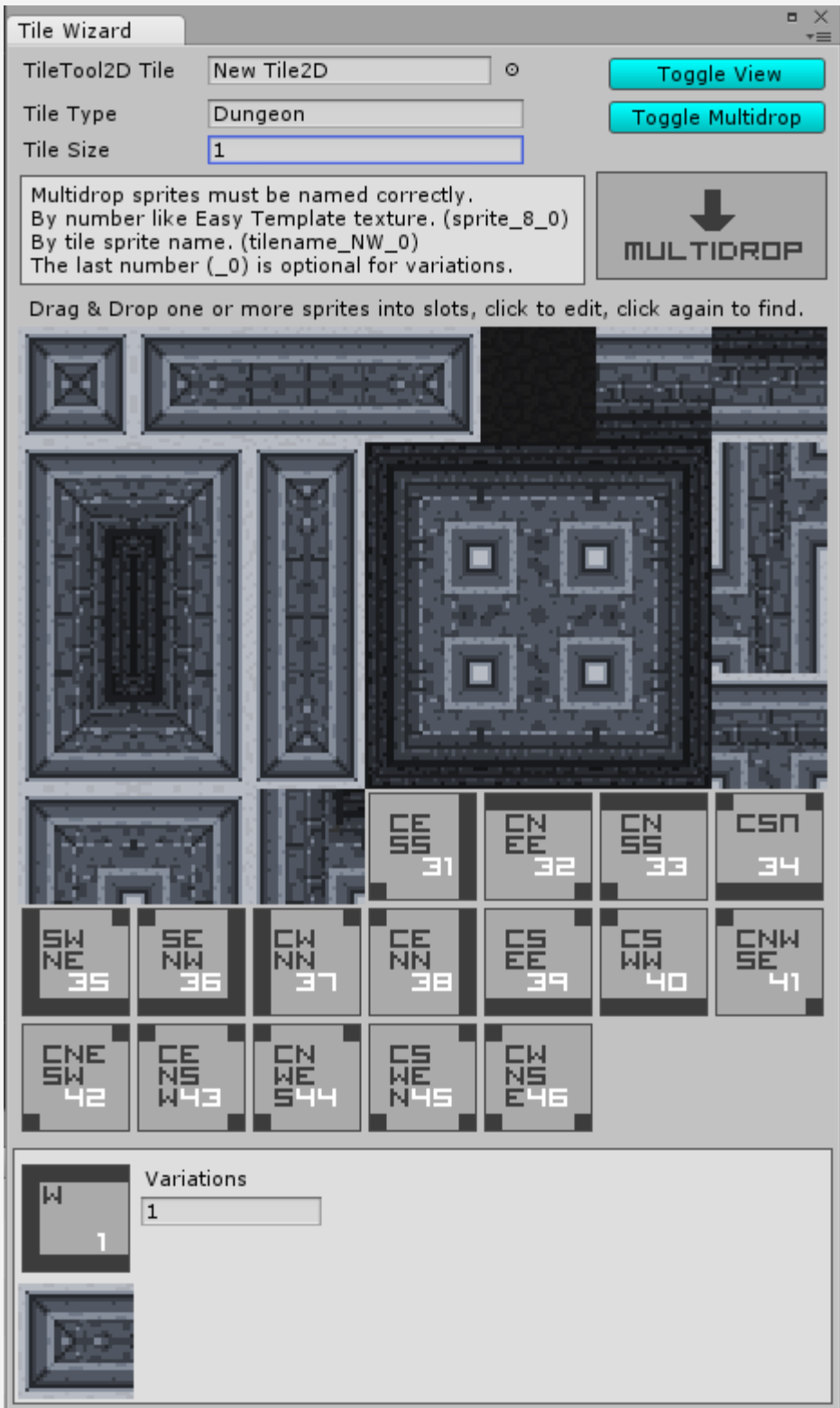
Sprite with transparent edge.
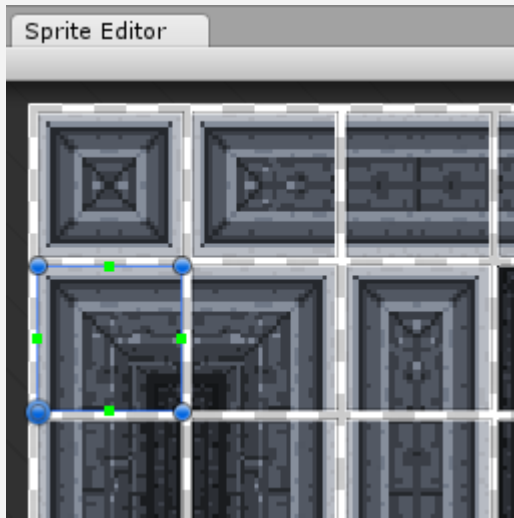
Solve the problem by bleeding edges 1 pixel after auto generating sprites.

Tile Wizard

The Tile Wizard is designed to easily be able to place sprites in the right tile segments.

Location : *Window > TileTool2D > Tile Wizard*

Multidrop

To use the multidrop to auto find sprites, tiles has to be named correctly. (see **sprite naming**)
Simply select all the sprites you want to include from the project folder, then drag and drop them into the multidrop window.

Segment Drop

Select and drop single or multiple sprites into the tile segment slots, multiple sprites can be dropped if there are more variations of a tile segment.

Animated tiles

Makes it possible to create simple looping animations on any tile using the tile type sprite variations. Use the wizard to add variations to the tile sprite types.

Animate Variations Properties
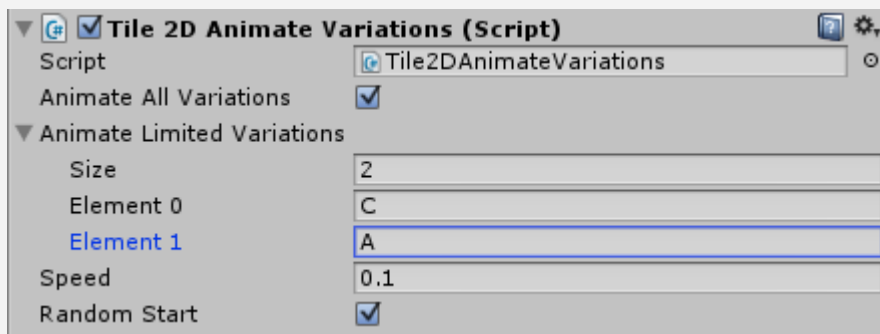
Animate All Variations
- If there is multiple variations of a sprite type the tile sprites will be animated.

Animate Limited Variations
- Animates only a selection of tile types.

Speed
- Speed of the animations.

Random Start
- Randomize start sprite and start time of the animations.

Loop
- Enable to loop the animation indefinitely.

AutoStart
- Play animation at start, or when a new tile is added.

Updates

Version 1.54
- Added **Tile2DAnimateVariations** script. Makes it possible to create simple looping animations on any tile using the tile type sprite variations.
- Added Box Erase.
- Fixed UI tool buttons.
- Fixed Snap to work on small tiles.

Version 1.53
- Fixed depth sort scripts resetting after play. Added Depth Sort Demo Scene.

Version 1.52
- Fixed DestroyTile function not working in run-time.

Version 1.51
- Fixed Box Draw on big tiles. Erase and Fix is now locked to tile size.

Version 1.5
- General performance improvements.
- Added Box Draw mode. Limited to 50x50 tiles for performance.
- Option to switch between Physics or Loops to detect tiles. Physics is faster but requires colliders.
- Option to disable Undo functionality. Undo requires a lot of processing power and can get very heavy when working with thousands of tiles.
- Custom tile thumbnail.

Version 1.41
- Added multi canvas support.
- Added select mode. (Disables drawing to easier be able to edit in editor)
- Added 2D top down depth sort scripts.

Version 1.4
- Added the **Tile Wizard**.
- Added the Prefab Creator.
- Colliders are no longer needed to draw and erase.
- Changed from prefab preview to texture preview in the preview thumbnails.

Version 1.3
- Added Pixel Top Down example.
- Sorting with Unity layers ignores sprite sorting order.

Version 1.2
- Added easy template texture and tile.
- Fixed blinking preview window.

Version 1.13
- Fixed draw function not working after entering play mode.

Version 1.12
- Fixed null reference error when arranging layers.
- Fixed attachment sorting.

Version 1.11
- Unity sprite layer support.
- Attachment improvements.
- Fixed null error on erase.

Version 1.1
- Added Attachments. (Custom colliders, animated tiles ++)
- Tile size support. (Tiles can now be bigger or smaller than 1 unit)
- Fixed auto fill not finding all sprites.