

RETRO PIXEL LANDSCAPES

INSTRUCTIONS

Also available as a video on YouTube:

<https://www.youtube.com/watch?v=EEevelkpmPC>



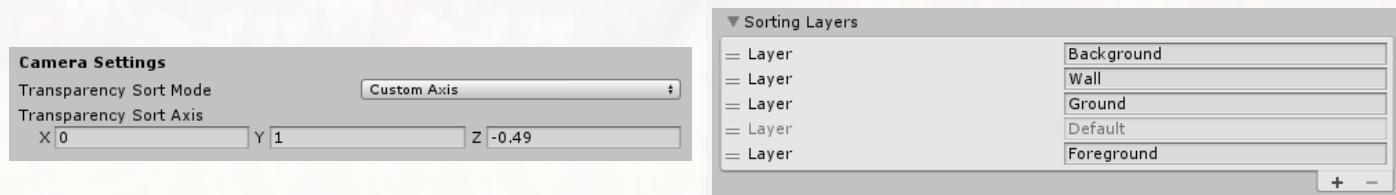
Retro Pixel Landscapes

INSTRUCTION INTRODUCTION

Welcome to this instructions/tutorial document, with best practice tips for building your worlds with the **Retro Pixel Landscapes** asset pack.

Keep in mind that this suggested workflow will vary in usability depending on the setup of your project. Try your way towards whatever works best for you!

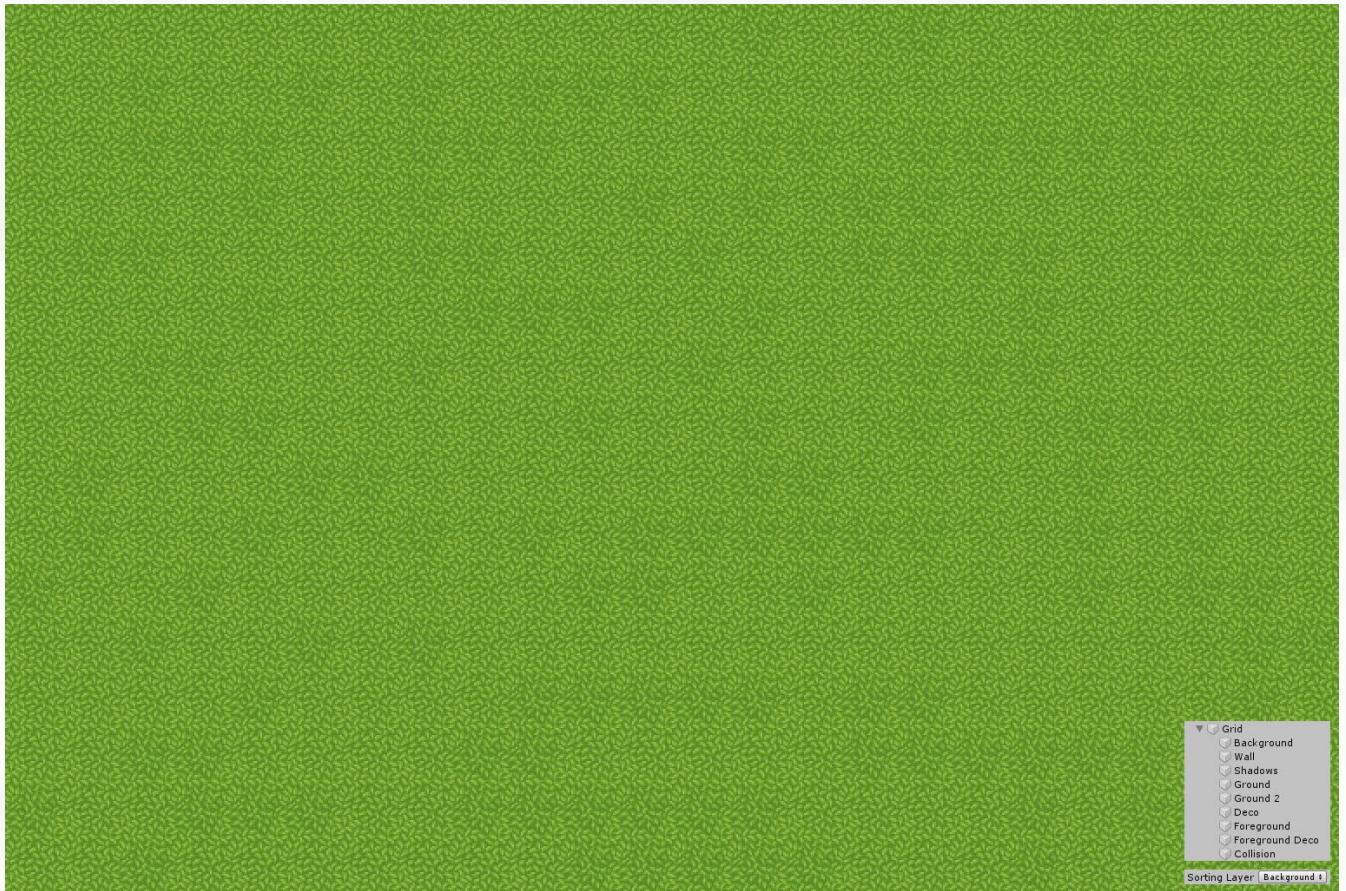
Throughout this document, we'll be looking at how the Grasslands demo level is built up. We'll be tackling layer by layer. Hopefully, this'll give you an idea of how to make landscapes with depth and variety. For this setup to work, it's important that you follow the suggested transparency sort mode and sort axis, as well as the suggested sorting layers to use for the different tilemap layers.



Please note that this asset pack requires the 2D Extras from Unity, [available here](#). It is also important that the sorting layers are sorted correctly, refer to the image above.

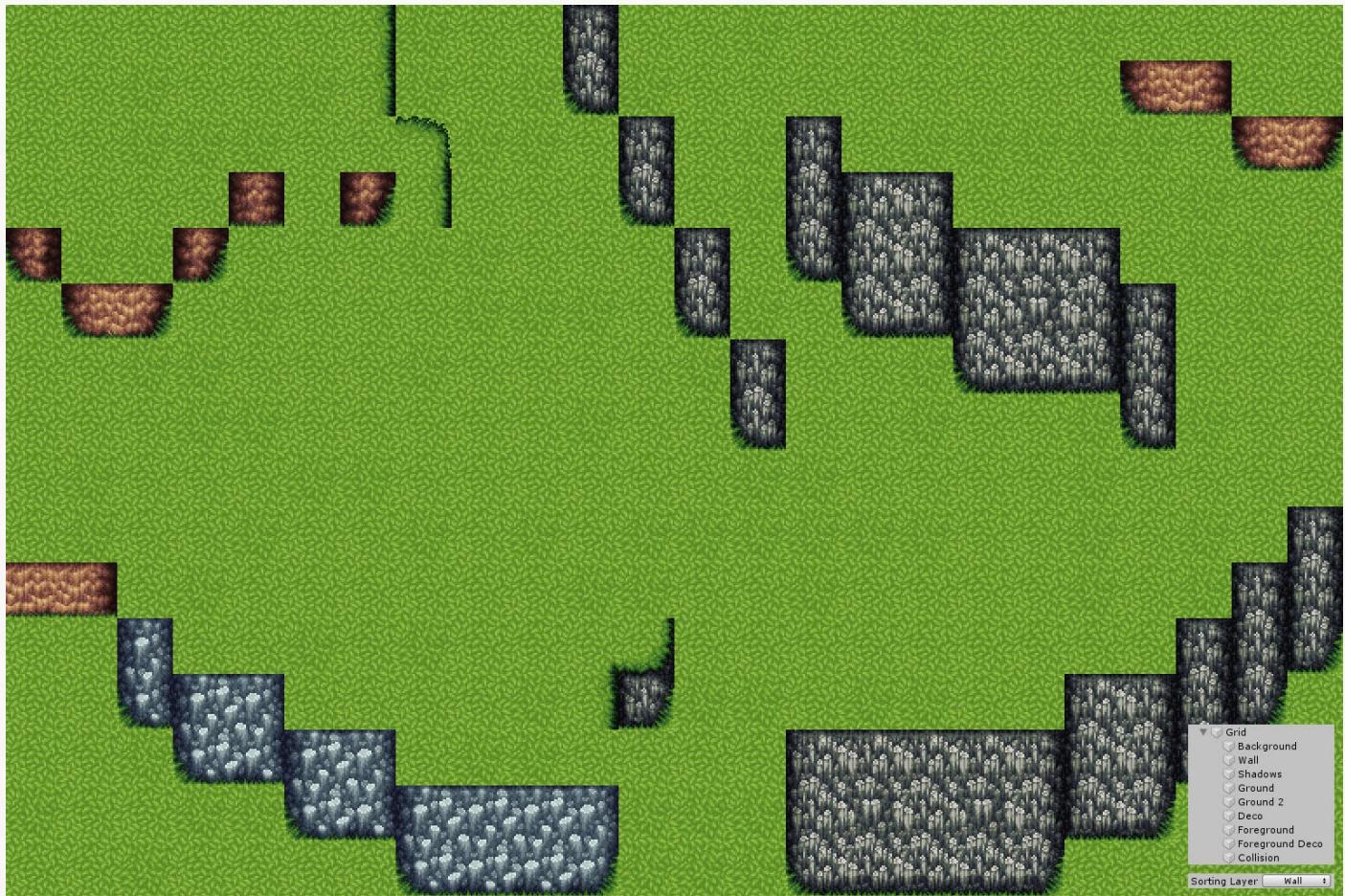
Let's get started!

BUILDING A LANDSCAPE

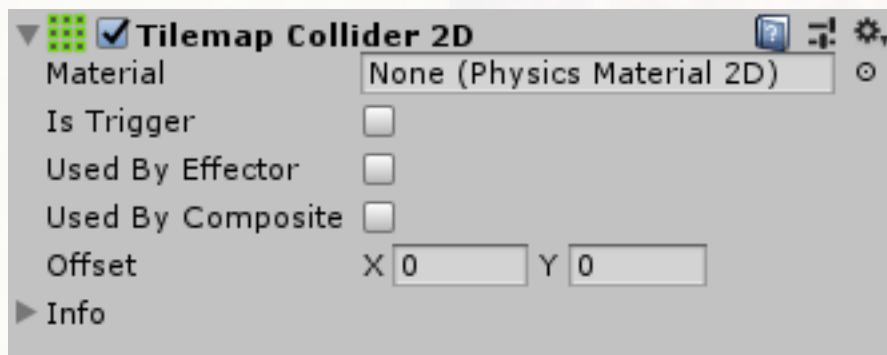


First and foremost, the level starts with a basic Background layer. This is simply filled with the two variant grass textures, as a guide to the general size of the tilemap overall. The sorting layer is set to, you guessed it, Background.

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Next up is the Wall layer. This contains all the wall tiles on the map, sorted on the Wall layer. There's another component added to this, namely the Tilemap Collider 2D component.



This works perfectly for the wall tiles layer, as we don't want the player to be able to walk through any of the walls.

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Next in order is the Shadows layer. This is optional, but you might find it gives the scene extra depth to use some of the included shadow shapes in the Shadow Tiles tile palette. This layer is also on the Wall sorting layer, but with a higher Order in Layer, so it is always rendered on top of the walls.

Order in Layer 2

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The Ground tilemap makes use of the ground Rule Tiles, located in the top-left of each respective ground and wall set. The rule tiles will automatically paint the correct tiles to form a ground shape. The rule tiles are also set up to automatically add Corner Tile Prefabs where needed, to transition smoothly between corners, for example. The Sorting Layer is set to the Ground layer.

The Ground layer also contains all the Water rule tiles used to form the river across the map.

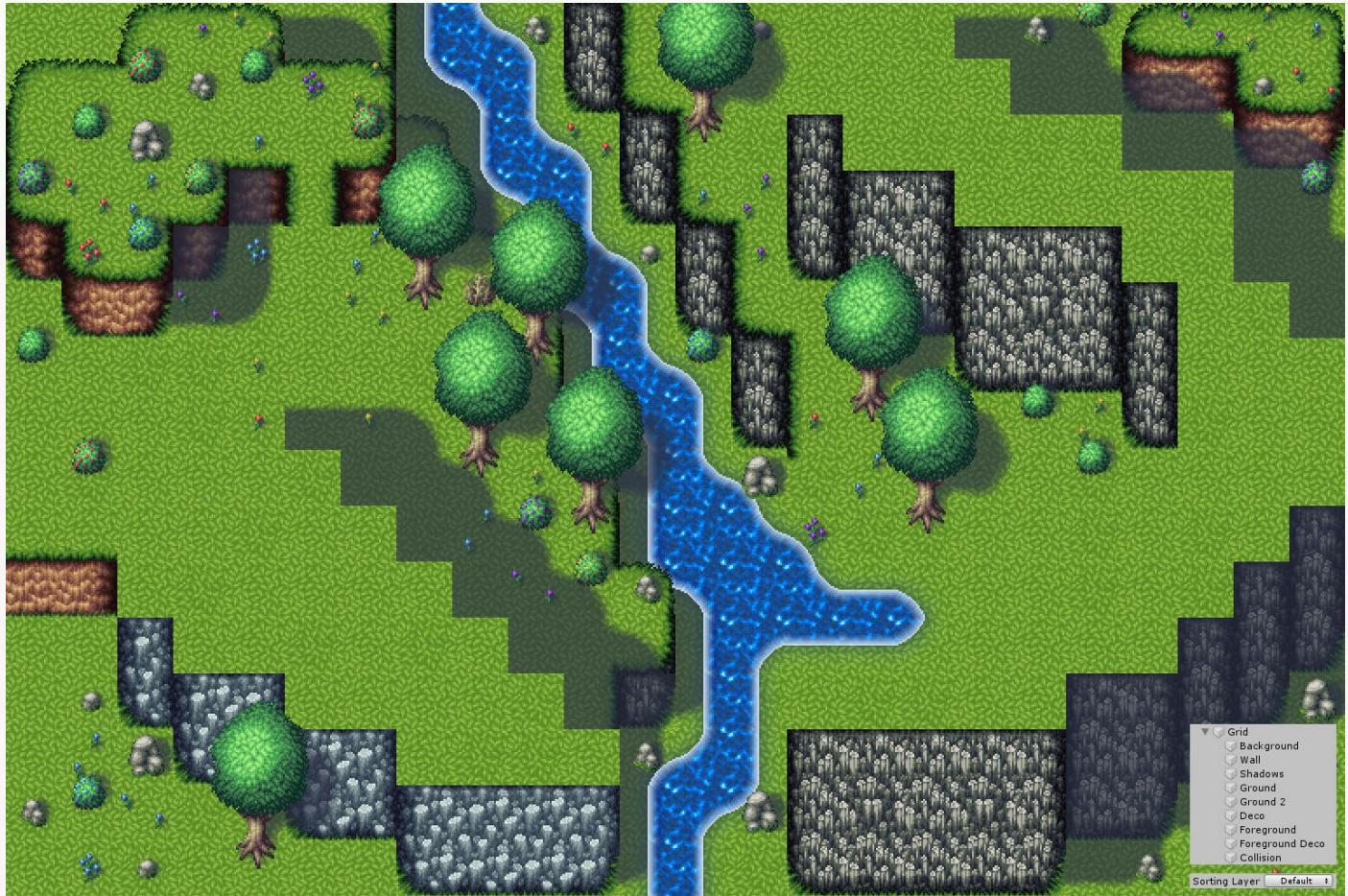
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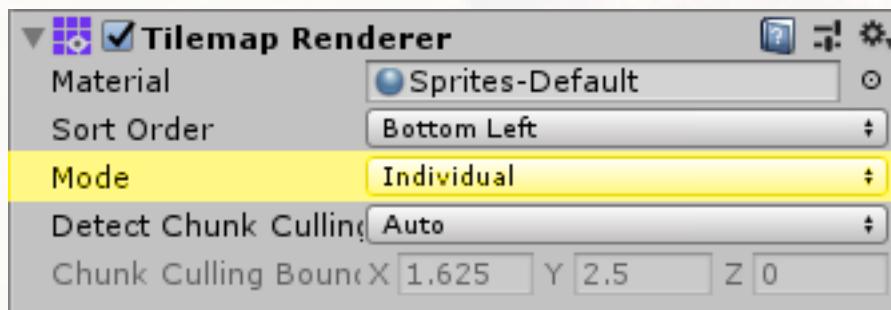
Ground 2 is exclusively using the individual ground tile pieces instead of the rule tiles. They form some of the tiles bordering around the river, to add depth to the scene. This layer is set to use the Default sorting layer, with a negative offset in Order in Layer to prevent it from rendering on top of, for instance, a player character, which should ideally also be sorted to the Default layer.

This also renders some of the tile pieces above the foamy borders of the river. Keep in mind that, when using the individual tile pieces, you must also manually place the separate corner tiles, to prevent sharp seams between some tiles.

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Next up is the Deco layer. This contains several different decoration objects from the Grass Deco set. Trees, flowers, rocks and so on are placed on this layer, which uses the Default sorting layer. Using the sample layering and sorting setup, this will work well together with characters from, for instance, the Retro Pixel Characters and Retro 2D Characters packs. Your character will sort behind or in front of the object for an added illusion of depth. That is, provided you pay attention to an additional setting that we haven't touched upon before!



To get the sorting correct, you'll need to set the Mode of the tilemap renderer to Individual, as opposed to Chunk. As you might notice, this layer also uses the Tilemap Collider 2D component. All the deco objects of each set contain custom collision shapes.

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Foreground is the next tilemap. This is where things start getting more involved, but not at all too complex! Simply put, this layer contains the ground tiles for the large stone and cliff platforms in the map.

The tiles are painted with the rule tiles, and use the Foreground sorting layer in order to render in front of the player character. You'll note that this layer contains no collider component. We'll get to that in a couple of layers!

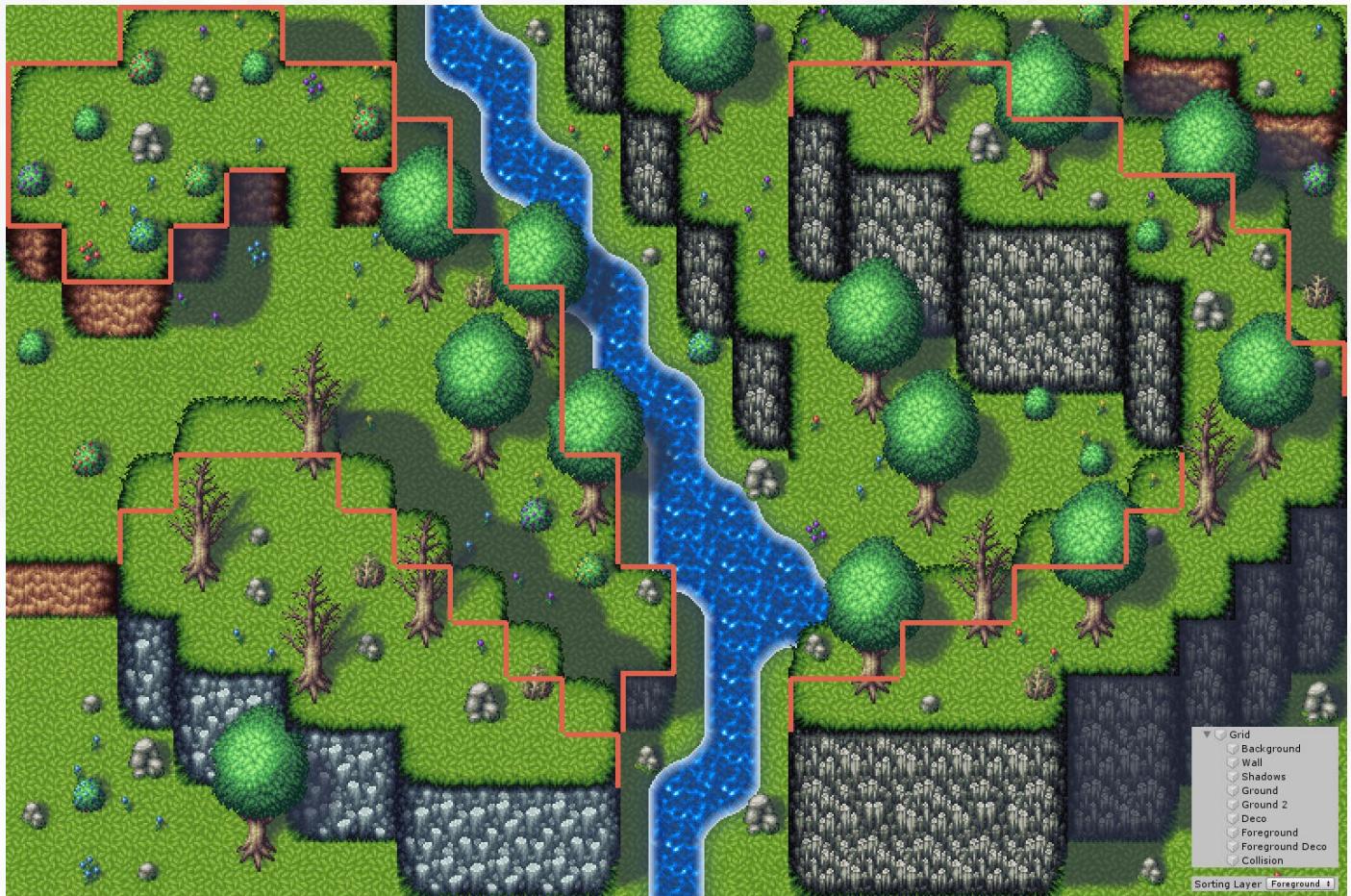
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Foreground Deco contains all the deco objects on the previously mentioned stone and cliff platforms. This is set up pretty much the same way as the regular deco layer, with Individual mode sorting.

This layer also uses the Foreground sorting layer, with an increased Order in Layer to render on top of the foreground ground tiles. This layer doesn't contain collision information either, as the two platforms are unreachable for the player.

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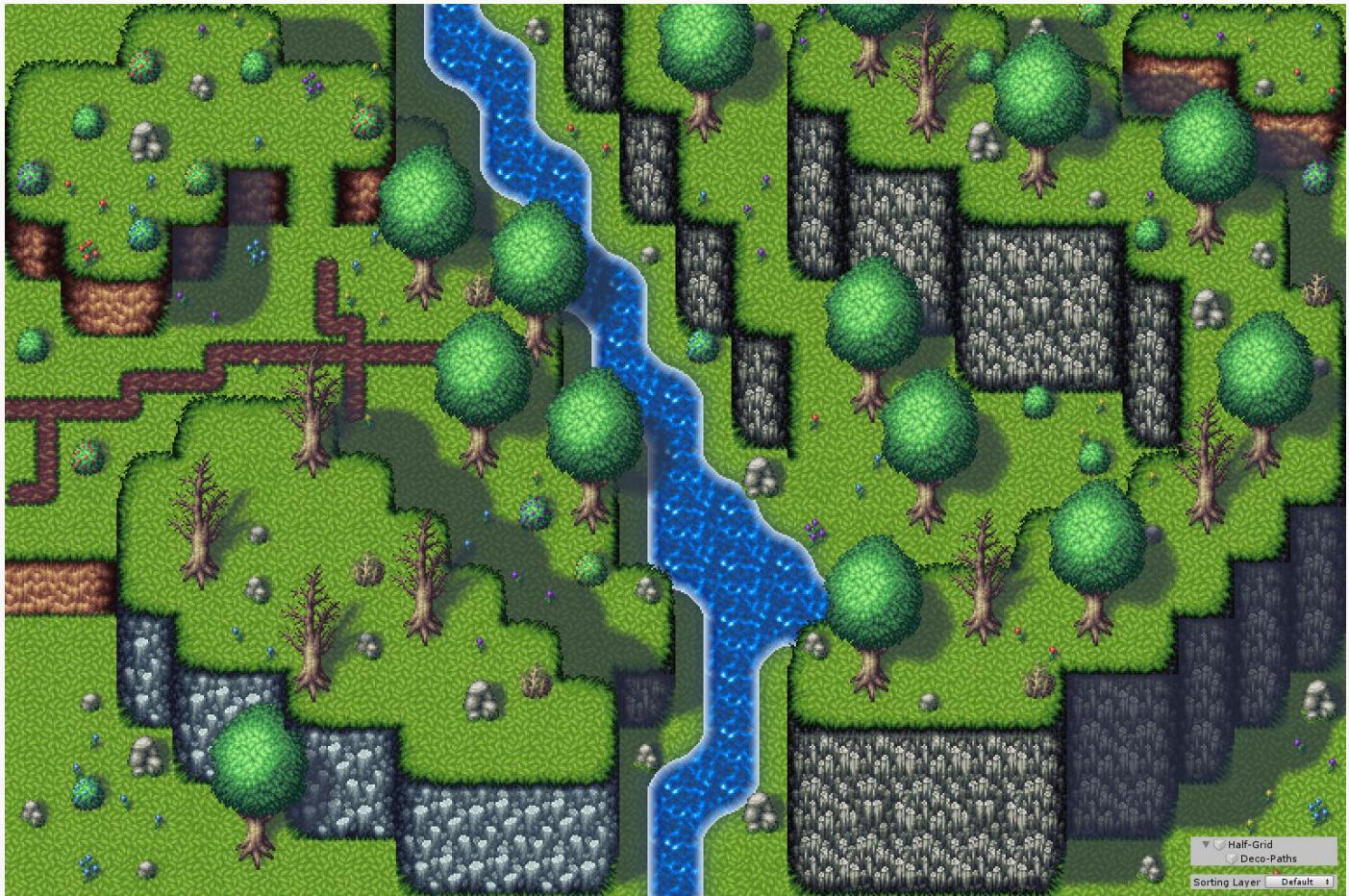
Last, but not least, is the Collision layer. This layer is probably the least straight forward in setting up, but you'll find that this method gives you a lot more freedom of control over the collision shapes of your scene. This layer uses the tiles in the Collision tile palette. The red lines represent the collision shapes of each respective tile.

On the top-left platform in the scene, the lines follow the shape of the platform, leaving an opening for eventual characters to traverse up and down it.

For the foreground platforms, the collision tiles have been painted with an offset of one tile lower. This allows a character to walk behind the top-most tiles of the platforms for, you guessed it, a sense of depth! The Collision sorting layer is set to foreground, with a high positive offset, to ensure that it is always visible when editing.

When you've finished working on your collision layer and want to test your scene, simply hide the Tilemap Renderer component to get rid of all the red lines surrounding the platforms.

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We're done... Almost! There's also the Half-Grid object with the Deco-Paths tilemap layer. The ground path and footprint tiles in the different deco tile palettes are only half-tiles in size, so they require a separate grid object with a Cell Size of 0.5 x 0.5 instead of the regular 1 x 1.

Like the other deco layer, this is set to Default sorting layer, but with an offset of -1 in Order in Layer to ensure that it doesn't overlap the other deco objects. You could also put paths and footprint tiles on the ground layer with a positive offset, either way is fine!

And that's all there is to it! As I mentioned before, this is only one possible way to set up your lush, pixelly landscapes. If you'd like an even more dense forest area, you could make a deco layer using a half-grid size so that you could place them even tighter together.

This method will give you a solid starting point and a good idea of how the different tiles and objects work together. Feel free to share your own ideas or maps! If you have any issues with the pack, use the following e-mail: marcus@perdiv.com