

Mobile City Reference Guide

Check the last version at <http://tinyurl.com/mobilecity>

Intro

This package's intention is to provide the base for building a city for mobile. Low poly, batching, LODs (Level Of Detail) and low texture use were the main concept for the making.

For easy construction it's based on a modular system: pieces of 200 x 200 meters (or 200x200 units).

In the package the key contents are:

- Buildings both in predefined modules or individual.
- Ground modules
- Props (such as city objects, trees...)
- and other objects (skybox, sea plane...)

For an easy building kick off you will find modules finished with some props from the demo scene, drag and drop will be enough to have it working.

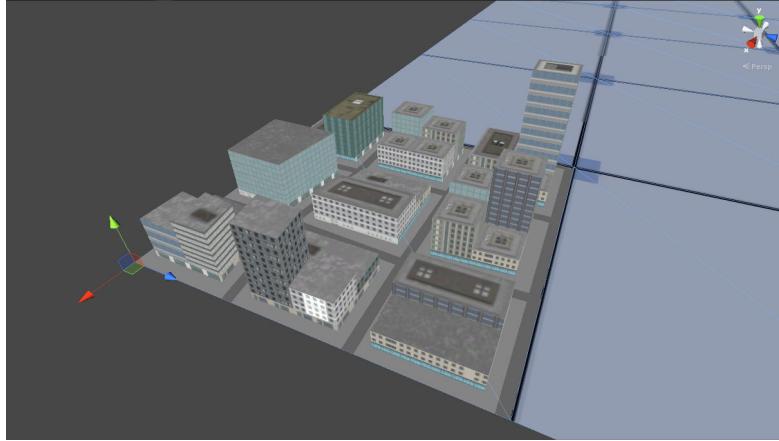
There are LODed (models that have LODs) versions for most of the prefabs for users with Unity Pro. Static batching drop a lot the draw call count.

There are although "not LODed" versions ready for Unity Free users, that will work with dynamic batching.

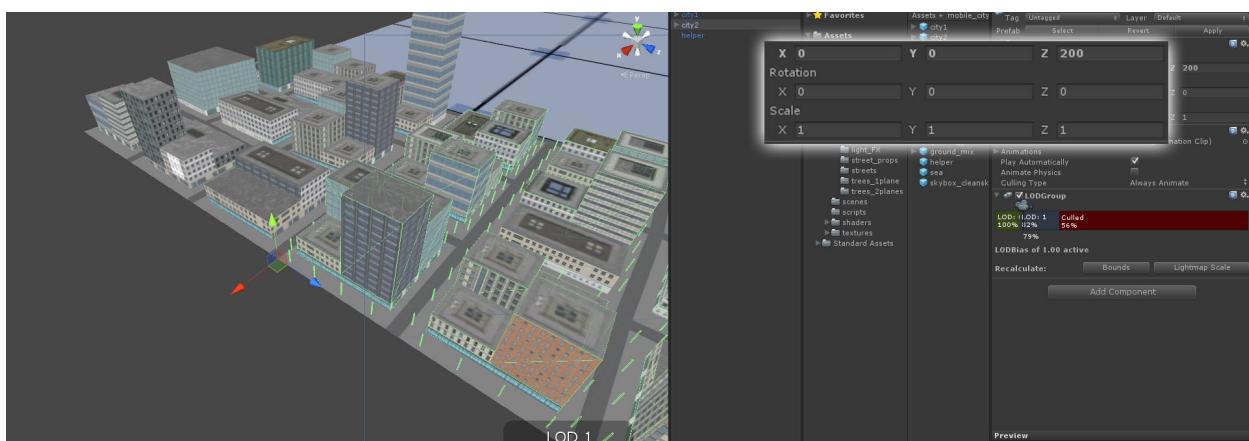
For this document I will assume you have the Pro version, and the folder names I'll use are the ones inside "LODed" folder. But if you want to use not LODed prefabs, just use the "noLODs" folder instead (i.e. **LODed/houses** vs **noLODs/houses**). The number and prefabs names' are the same in both folders.

How to build a city

1. For you to understand how it works I recommend you to drop the “helper” from **prefabs/** and place it at the origin (0,0,0). Each cell of the grid would be a module of the city.
2. Drop any “city” module from **prefabs/LODed/finished_modules** into the scene and place it at the origin too. As each module is exactly 200x200, you’ll be able to build a seamless city just taking care of the module situation on X and Z, in multiples of 200.



3. You can keep dropping modules and placing them taking in mind that the X and Z position from the origin will be always multiple of 200 (400, -600...). You can rotate the city modules but you will need to care about the street - sidewalk connections since there are only streets on 2 sides



4. There are two different kinds of modules: one for the city, where each base has its buildings prefab (ground1 with buildings1, ground2 with buildings2, and so on). Then there are some “exterior_modules” that don’t tile in all directions, beach or green hill themed, thought for building

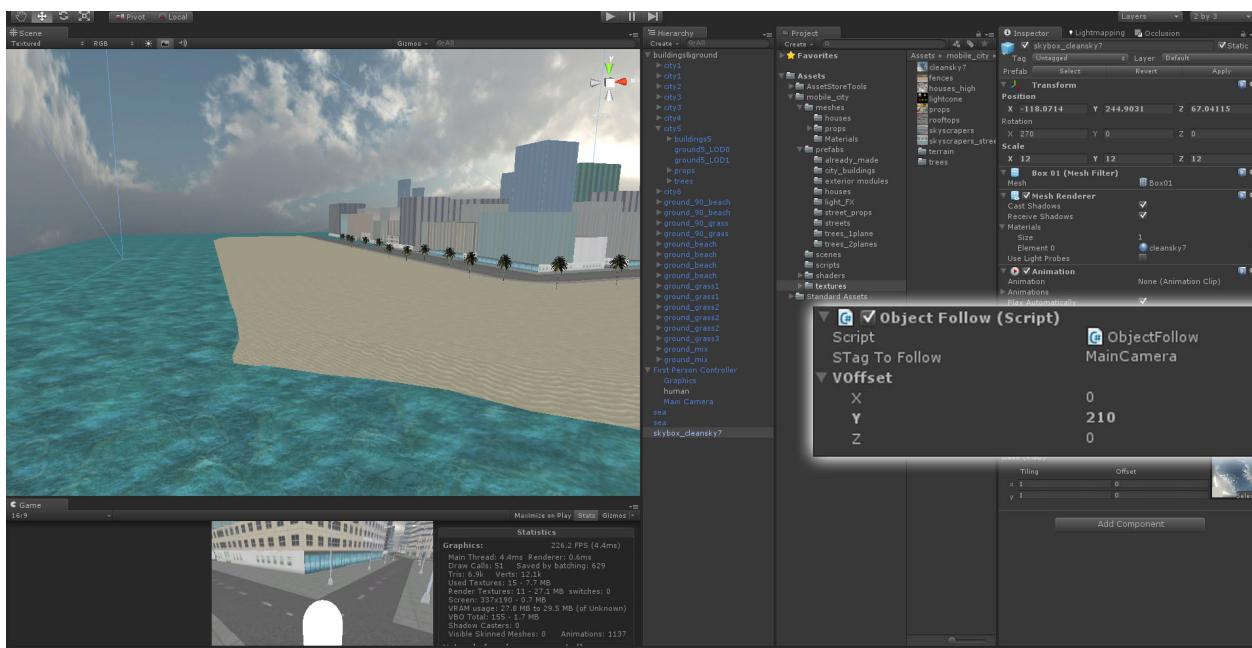
the limits of the scene. . This may sound a bit confusing at the beginning, but if you want to add your own props from scratch (so you are not interested on the finished modules I talk at point 2) all you may need to know is that you'll find all the bases ready to add whatever you want at **props/LODed/modules_noprops**.



6. To finish your scene you may need a sea plane and a skybox.

There is a modular seaplane of 5000x1000 meters seamless, you can place where needed. The skybox provided is half a cube with a script for main camera following. This is a great system for a single draw call skybox with really low performance impact. If you choose to use this system and you would like to have more skybox textures, there is an Asset Store set <https://www.assetstore.unity3d.com/#/content/639>.

After placing the skybox prefab in the scene you will only need to take care about the scale, depending on your camera clipping planes and the Y edge VOffset variable from the “Object Follow” attached script (controls the Y offset of the skybox in relation to the camera pivot).

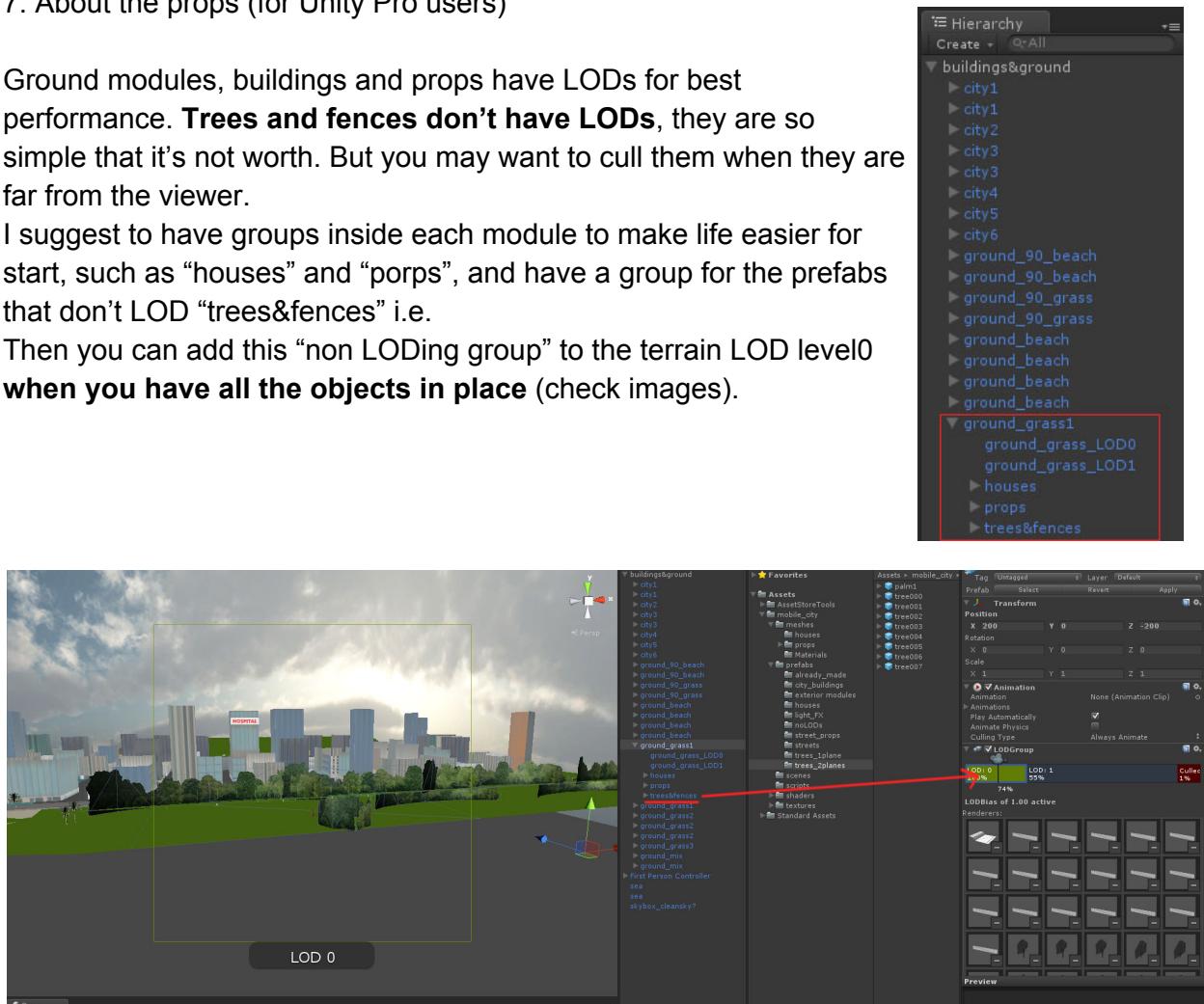


7. About the props (for Unity Pro users)

Ground modules, buildings and props have LODs for best performance. **Trees and fences don't have LODs**, they are so simple that it's not worth. But you may want to cull them when they are far from the viewer.

I suggest to have groups inside each module to make life easier for start, such as "houses" and "porps", and have a group for the prefabs that don't LOD "trees&fences" i.e.

Then you can add this "non LODing group" to the terrain LOD level0 **when you have all the objects in place** (check images).



This way your not LODed prefabs will LOD with the terrain. This is the way the existing "finished_modules" work.

Don't add to a LOD group objects that already have a LOD (don't add the "crate" pefab to the LOD group of the terrain, i.e. because it's already LODed).

FAQ.

Q. Why do some textures have some wasted space?

A. I plan to use that texture for something else in the future. When I run out of space in a texture I need to make a new atlas, and sometimes it's not filled completely till next update. But I care a lot about the optimization. Also, I try to make atlases that make sense, for things that may go together and share the same material (I would not use the skybox map for a street prop).

If you want to contact me you can do so at dactilardesign@gmail.com

Thank you for using my Assets.