

Creating Ireland in Minecraft Using Ordnance Survey Ireland Data



A collaborative project by:



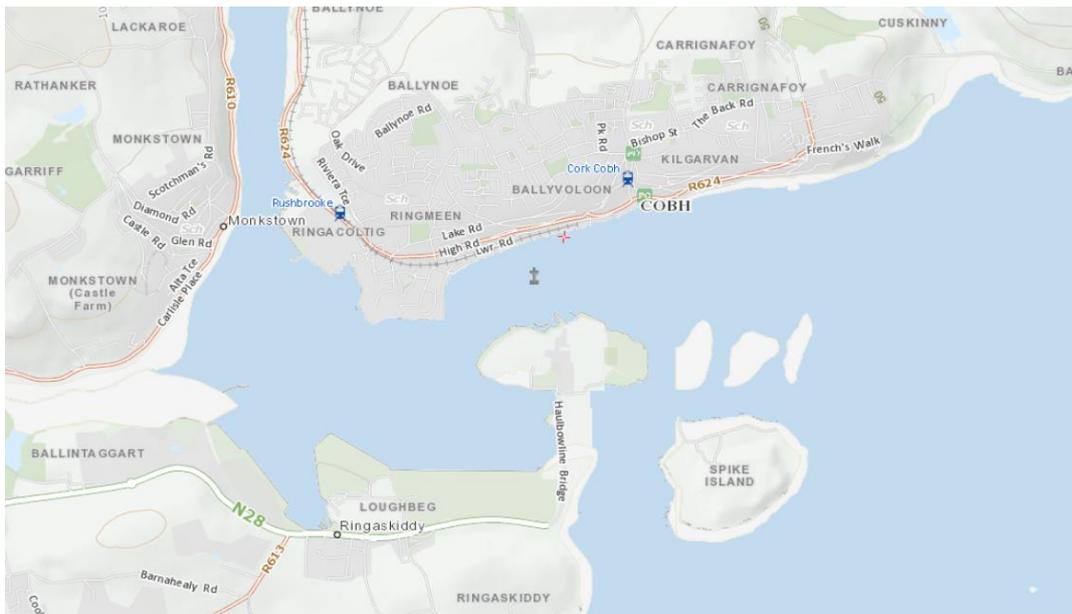
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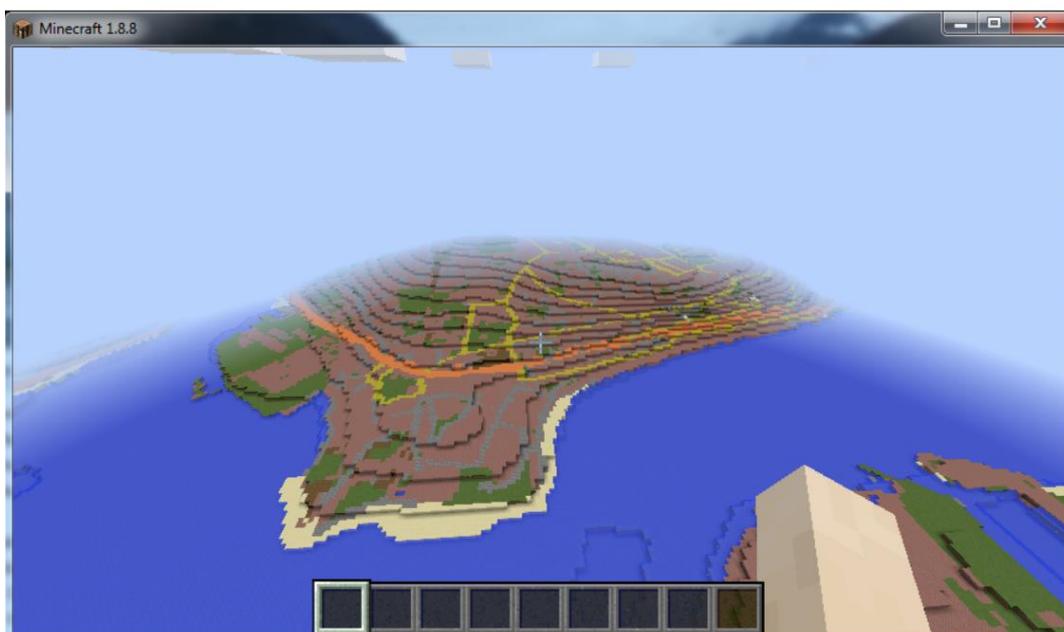
About

Ordnance Survey Ireland has developed the ability to deliver their OSi Data in a format, which can be read into Minecraft. Minecraft is defined as a virtual world built out of blocks that can be styled to mimic real world materials. Minecraft enables players to be creative and build constructions with textured cubes in a 3D generated world. We have used SAFE Software's FME to transform our object orientated OSi Data into the Mojang developed format helping us create the first map of Ireland that includes cities and mountains! We have worked with the CoderDojo community to get create this map for everyone to use.

OSi map data:



Below is Cobh in minecraft:



The OSi Data Minecraft Workbench

[SAFE Software](#) has created customised Minecraft transformers within FME (Feature Manipulation Engine). These include:

- **The Minecraft Styler**
- **The Minecraft Rasterizer**

What does this do? The FME workspace essentially assigns the block styles and their position in the minecraft world to the information provided by the OSi Data. This data is used to build similar to a layered effect, where certain materials lie on top of each other. For example, a “grass block” needs to be placed on top of a “podzol soil block” in order to grow or flowing water requires a physical block boundary to prevent flooding.

Approach

Using the info above an area of OSi Data was read into the FME workbench. Each of the five layers of the Skin of the Earth was styled as Bedrock with a Vertical Offset of 0, thus giving the OSi Data Demo World a base layer from which to build on. The layers built for the OSi Data Demo World are as follows:

Layers built:

2. Vegetation/ Artificial

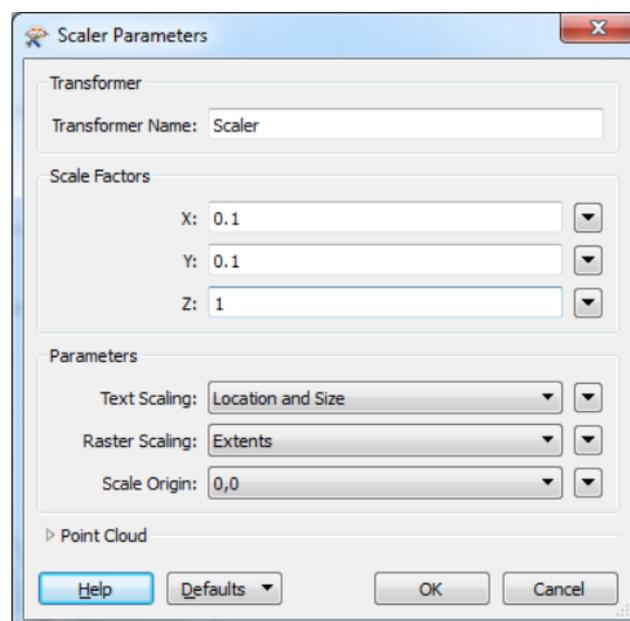
1. Podzol

0. Bedrock

These styled layers were fed into the Minecraft Rasterizer which converts the data into a single point cloud.

Scale

A 1:1 scale map of a country would take just as long to navigate in the game as it would to navigate that country in real life. We decided to create the map in a 1:1 scale as this was the best way to represent the Data and also for server hosting reasons :)



How to load the map

Please see instructions below on loading the map to your machine:

Windows:

1. Download the new map from: TBC.
2. Once you have downloaded the map you will need to add it to the minecraft directory on your machine to be able to open it. The folder consists of 2 files:
 - Level.dat
 - Region Folder
3. Copy and paste, these two files (“Level.dat” and “Region Folder”) replacing the original files into the following folder:
 - C:\Users***\AppData\Roaming\.minecraft\saves\Demo_World
4. Start Minecraft
 - Select Single player
 - Select the Demo_World
 - Play Selected World
 - Wait a few moments for data to load and enjoy!

Mac OS

1. Download the new map from: TBC
2. Once you have downloaded the map you will need to add it to the minecraft directory on your machine to be able to open it.
3. Open “finder” app then find “Go” on the nav bar and then find “Go To Folder” in the dropdown menu. Alternatively when in “Finder” use the command “Shift + CMD + G”.
4. Then type the following:
 - ~/Library/Application support/minecraft
5. Click “Go” and look for the “saves” folder. If it is not there create one.
6. Then un-zip the map file and copy and paste it into the “saves” folder.
7. Start Minecraft
 - Select Single player
 - Select the Demo_World
 - Play Selected World
 - Wait a few moments for data to load and enjoy!
8. Short tutorial video [here](#).

Other Resources:

Minecraft for Northern Ireland

Spatial NI have developed Minecraft for Northern Ireland. OSi intend to use the same legend and scale for our data. More information can be found at <http://spatial-ni.maps.arcgis.com/apps/MapJournal/index.html?appid=7635f24bb36b47cb92d99ba5aa9c17f3>

OSi Minecraft Legend

Legend		
Motorways	Light Blue Wool	
A Roads	Lime Wool	
B Roads	Orange Wool	
Minor Roads	Yellow Wool	
Local Roads	Stone Slabs	
Water	Water	
Plains	Grass	
Forest	Forest Biome	
Built Up Area	Bricks	
Railway	Black Clay	
R.O.I	Green Clay	