

# Fractal Rocks

## How to



## Basic workflow

Open "Meshes" folder.

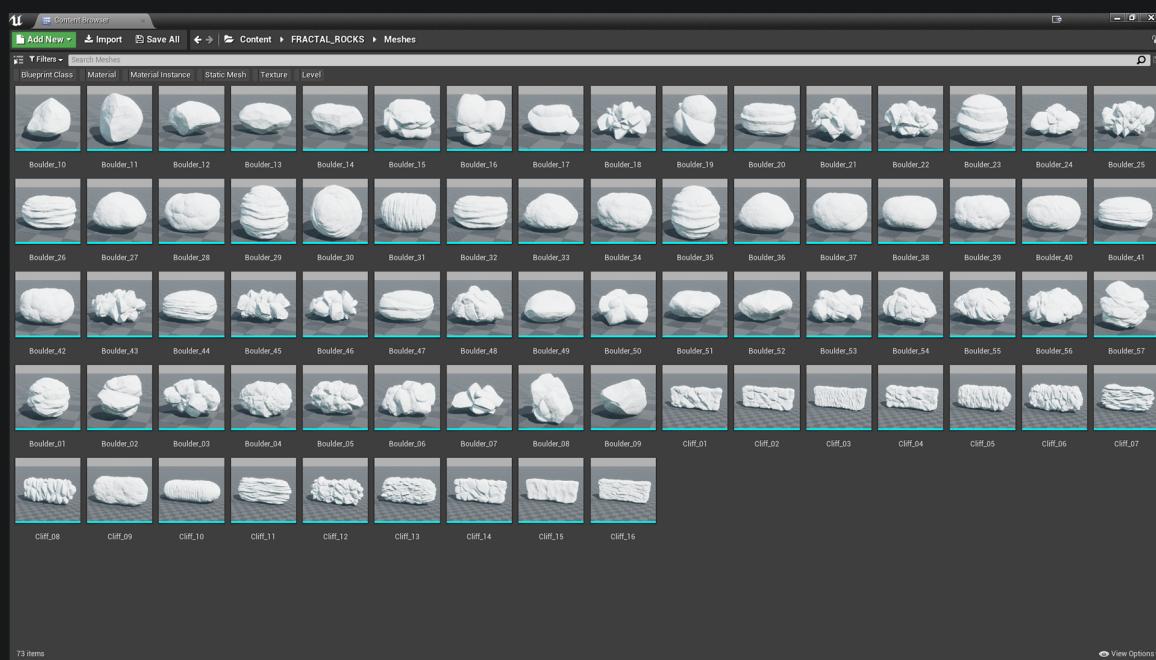
Choose a rock base shape.

Duplicate his Material instance and replace it to avoid destroying the original.

Drag your material textures in the corresponding slots for the base rock layer and if you need it, activate the top layer.

Tweak parameters until satisfied with the results.

And you're done.



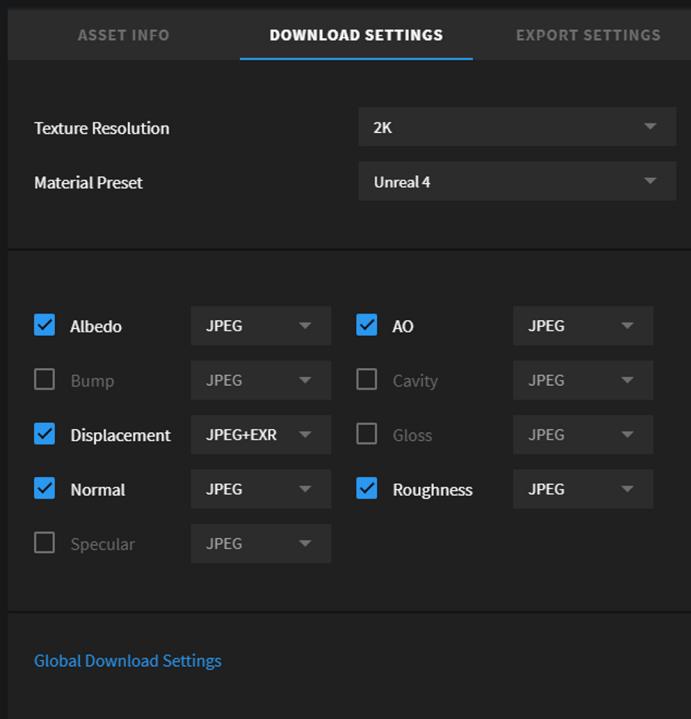
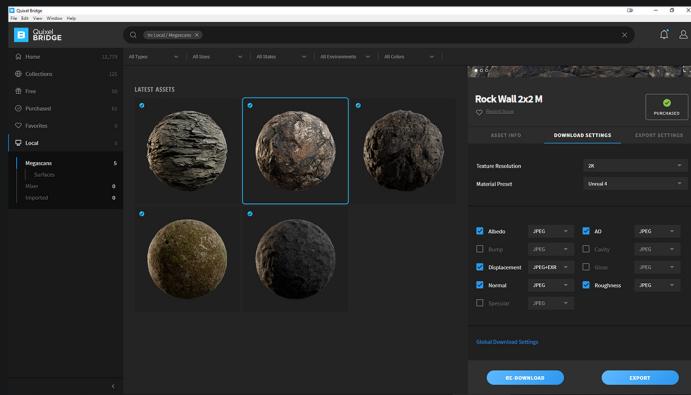
# Channels Packing

Here are the settings to use for packing the channels of the textures.

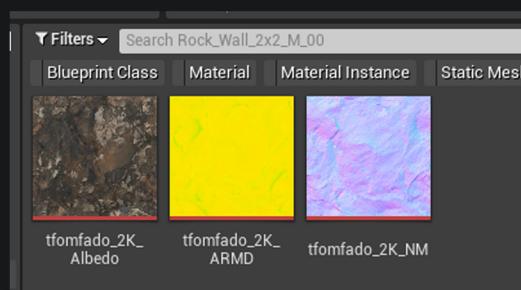
This step greatly improve performances and good working of the dynamic material.

Please , be careful and get the things at the right place and everything should be flowless.

I will use the megascans interface to explain the settings, but you can use your own materials and do the same packing.



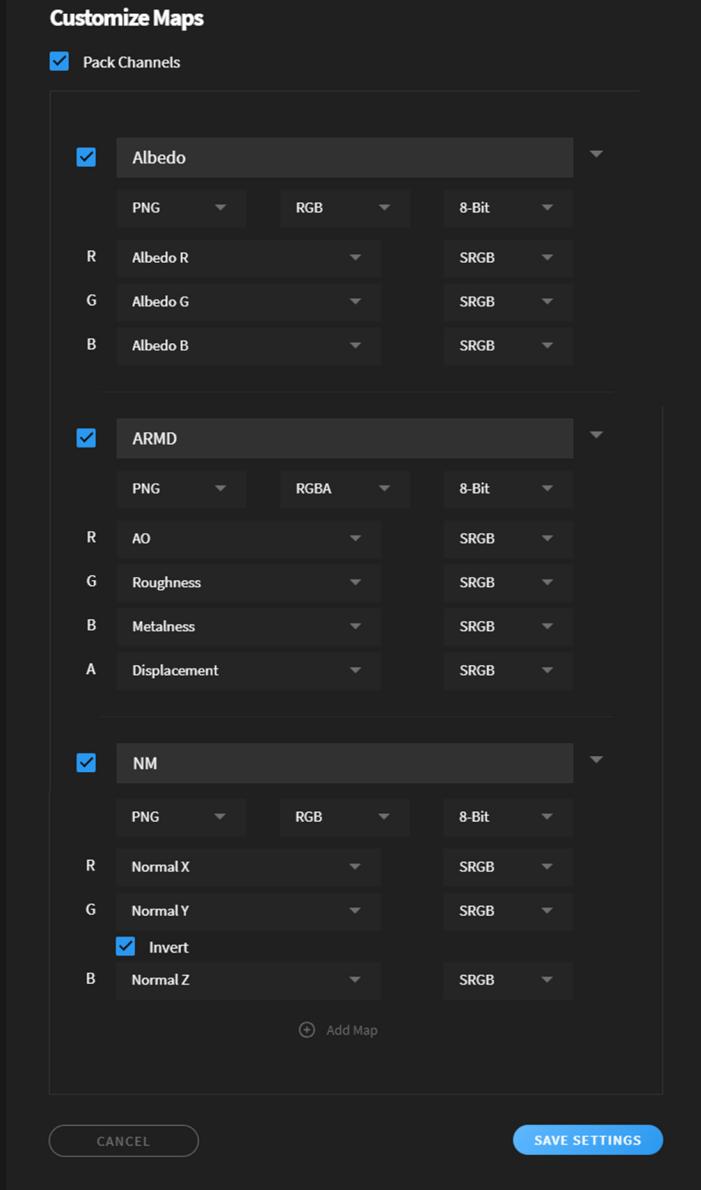
In ue4 , be sure to check the albedo is in sRGB  
and this is what it should look like



a few megascans surface don't have every required maps , so be careful and double check if you notice something wrong on the output.

you can manually fix those issues , like if you don't have the heightmap for exemple , you can use any editing program to make the channel full white.

the final ARMD should be yellowish , the others are quite casual.



# The Material

This dynamic material is composed of 3 parts.

The base , for assigning the right maps for the base shape of the rock .

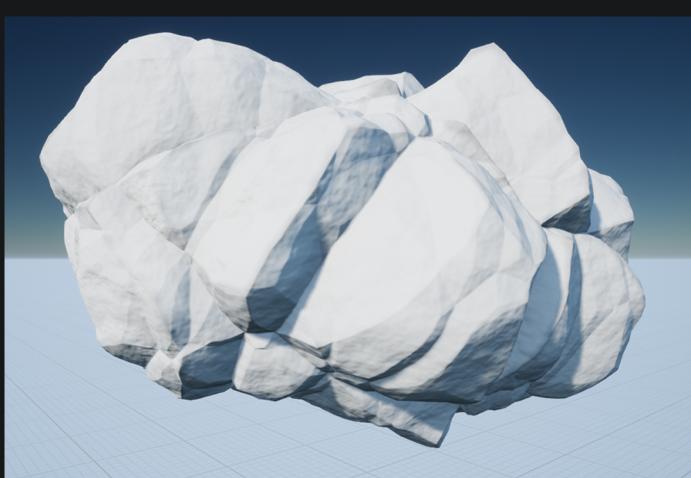
The Rock Layer, where you can assign a tileable PBR material and tweak some options.

The Top layer , that you can activate if you need to drop some other material on top depending on slope , controled by some parameters.

This product do not provide the rock and top layer texture , you have to use your own so it match the artstyle you desire.

The easiest way to have those tileable textures is to use Megascan , it's free if you use it for unreal engine.

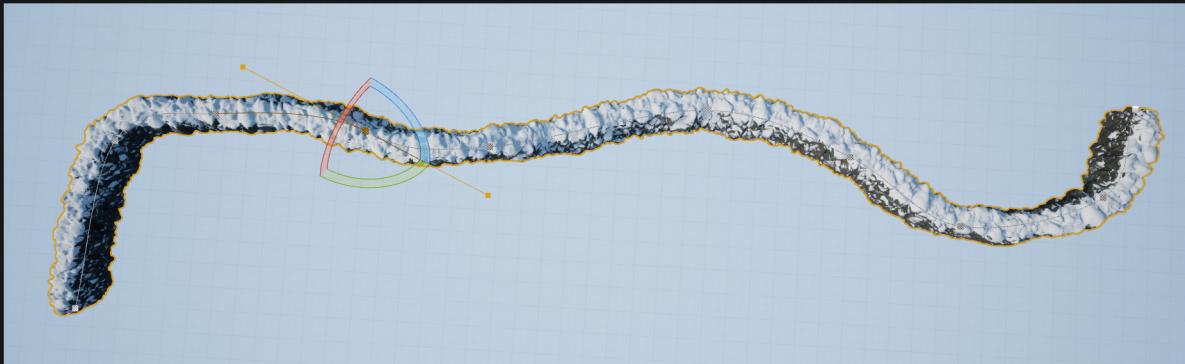
The naming of those parameters should be quite understandanble , but they all have description on mouse rollover if you need details on what the parameter is supposed to be used for.



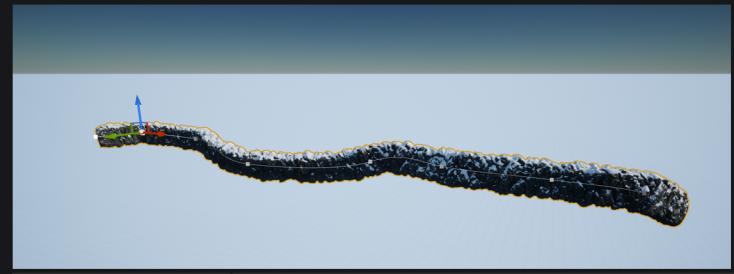
Parameter Groups

- Base
  - Base AOC  
 Cliff\_06\_AOC ▾
  - Base NM  
 Cliff\_06\_normal ▾
  - AO adjustment  
0.4
- Rock
  - Rock Albedo  
 Albedo ▾
  - Rock ARMD  
 ARMD ▾
  - Rock NM  
 NM ▾
  - Rock Roughness  
1.0
  - Rock UV Scale  
5.0
  - Use borders ?  
 border control
  - border color  
0.4
- Top Layer
  - Use Top Layer ?
  - Top Albedo  
 Albedo ▾
  - Top ARMD  
 ARMD ▾
  - Top NM  
 NM ▾
  - Top UV Scale  
500.0
  - Slope from mesh  
1.0
  - Slope from normals  
1.0
  - Slope from normal min  
0.0
  - cavity filler  
2.0
  - Top blend height  
2.0
  - borders blending  
0.5
  - borders contrast  
1.0
  - Use Triplanar ?

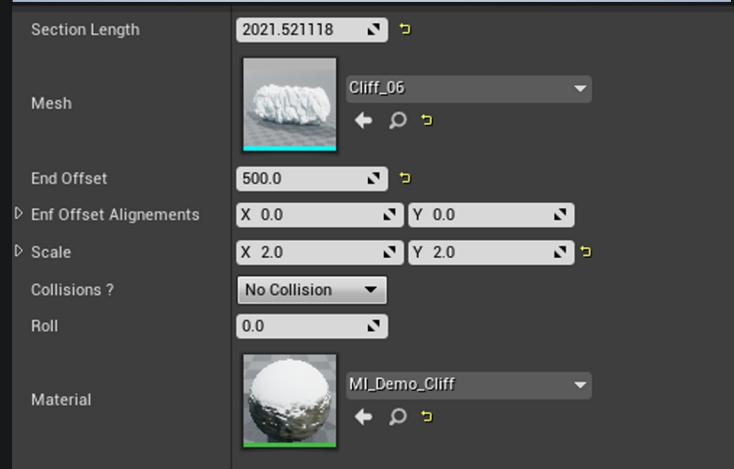
# The Cliff Blueprint



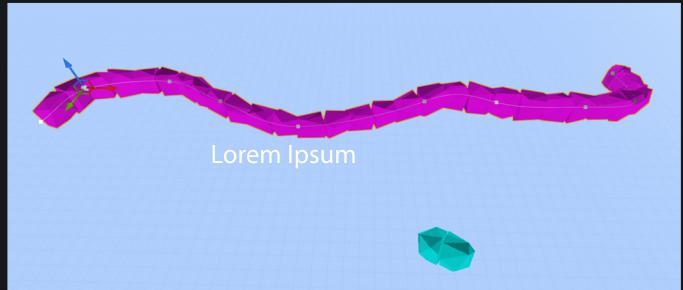
The Cliff spline tool is a way to create large walls of rock. Drop the blueprint in your level, use it like a simple spline , every vertex can be rotated to change the cliff angles and curves are adjusted with the tangents.



Minimalistic parameters keep it very simple to use. They all got description when rollover.



Every instance is alternatively rotated to use the other side of the mesh , so nothing is wated and it helps to hide some tiling.

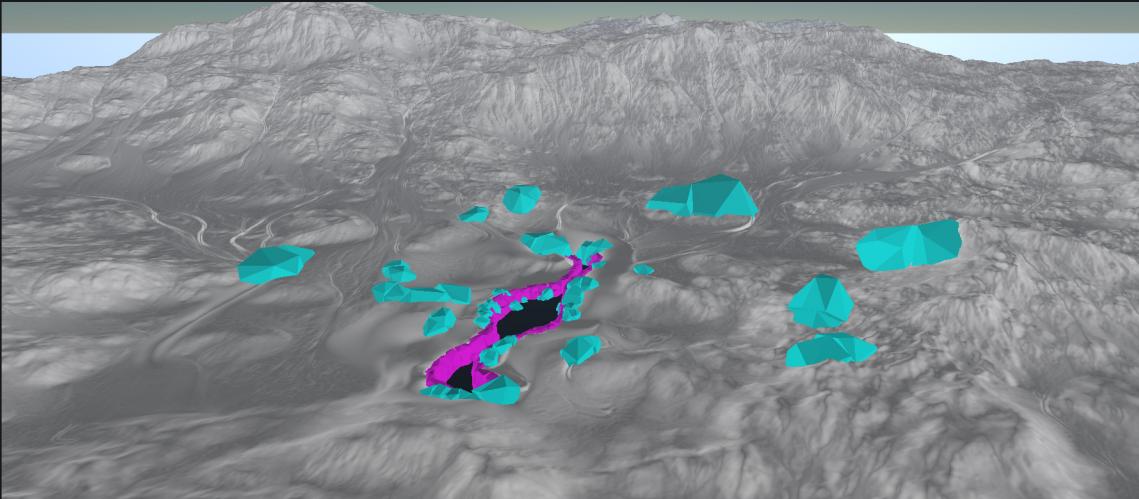


## WARNING :

When activated , collisions are calculated each time the spline is modified, it results in a freeze...  
It's highly recommended to disable collisions while working the spline shape.

## COLLISIONS

They are by default calculated with convex hull just to have some blocking features while remaining ultra light.  
If you need to scale them really big and need precise interaction with it , just use the full mesh as collision.



## LODs

Level of details are set on the engine defaults with a total of 4 LODs including LOD0 the original , which is always around 10 000 tris.

The material have the transition blending already activated.

This is quite already optimal but you should always consider tweaking them to your project needs.

