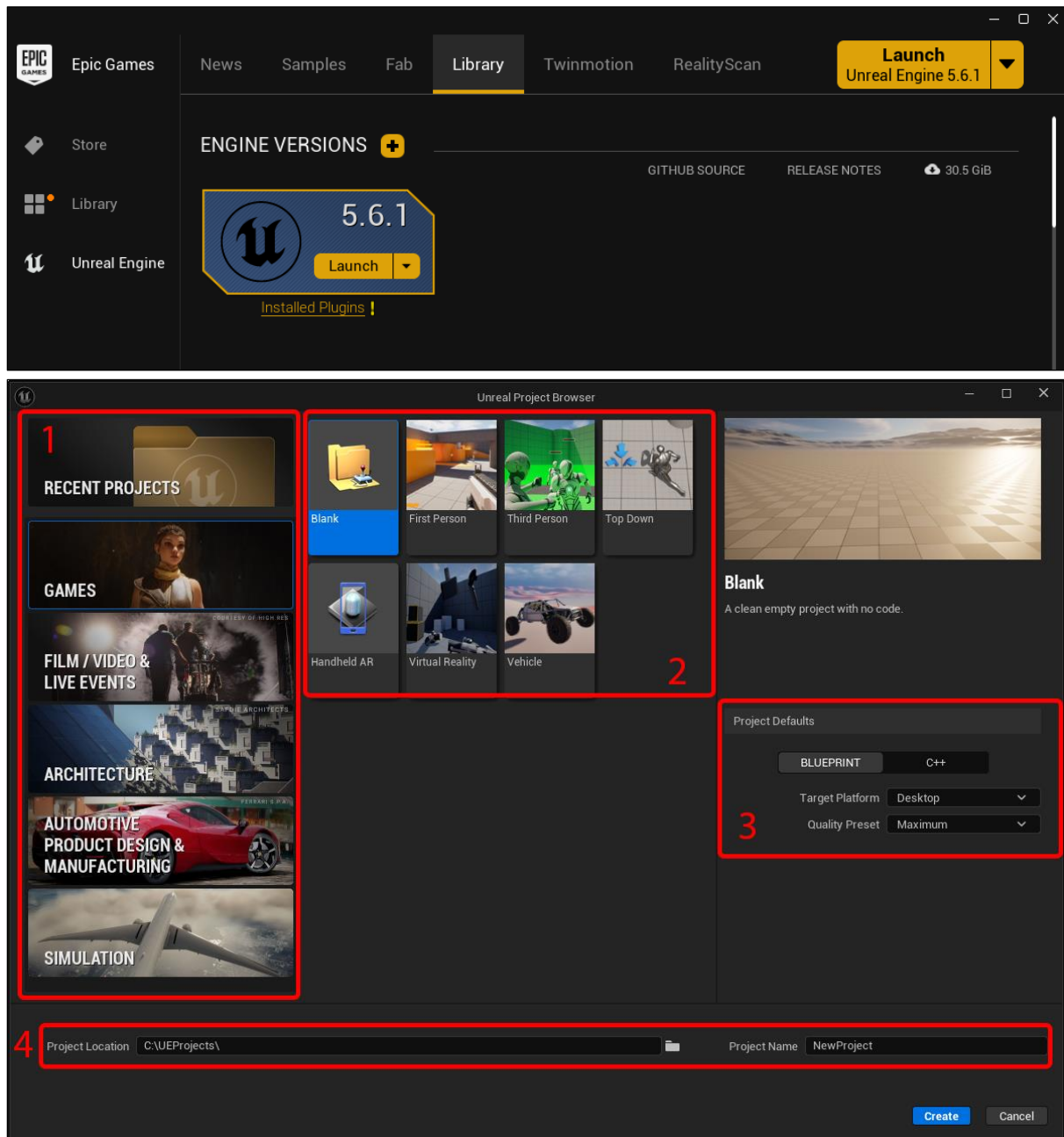
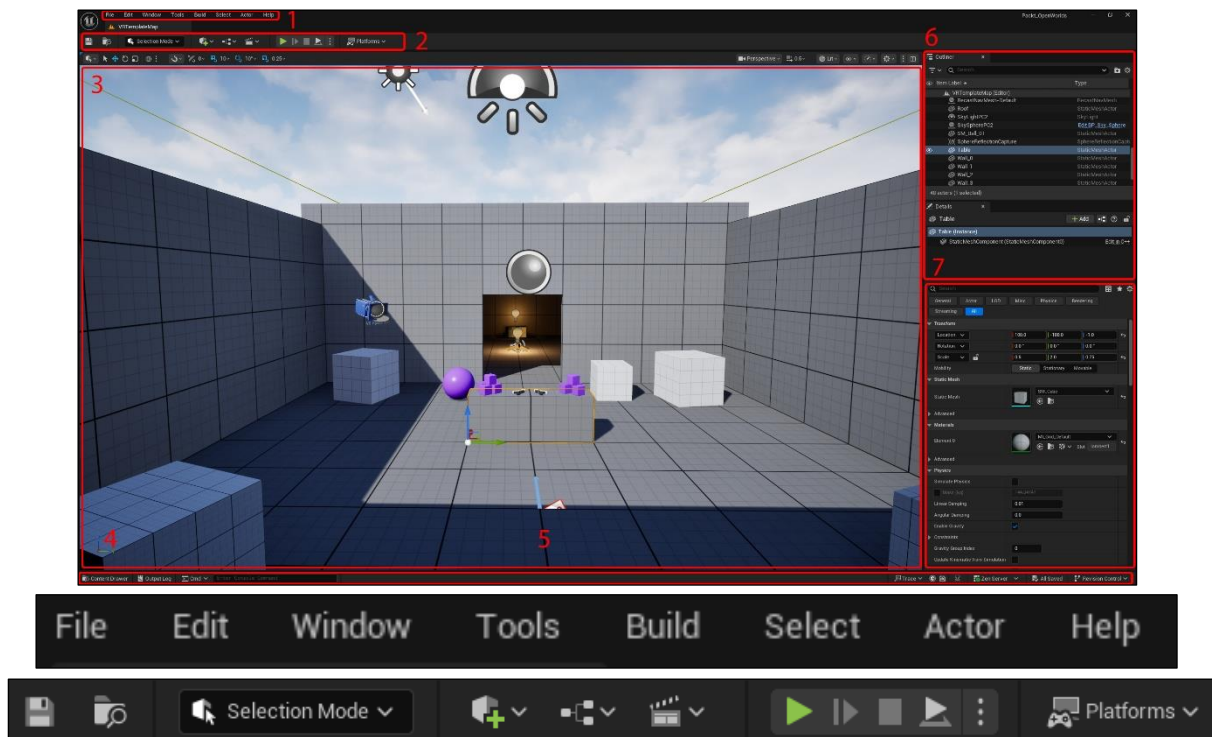
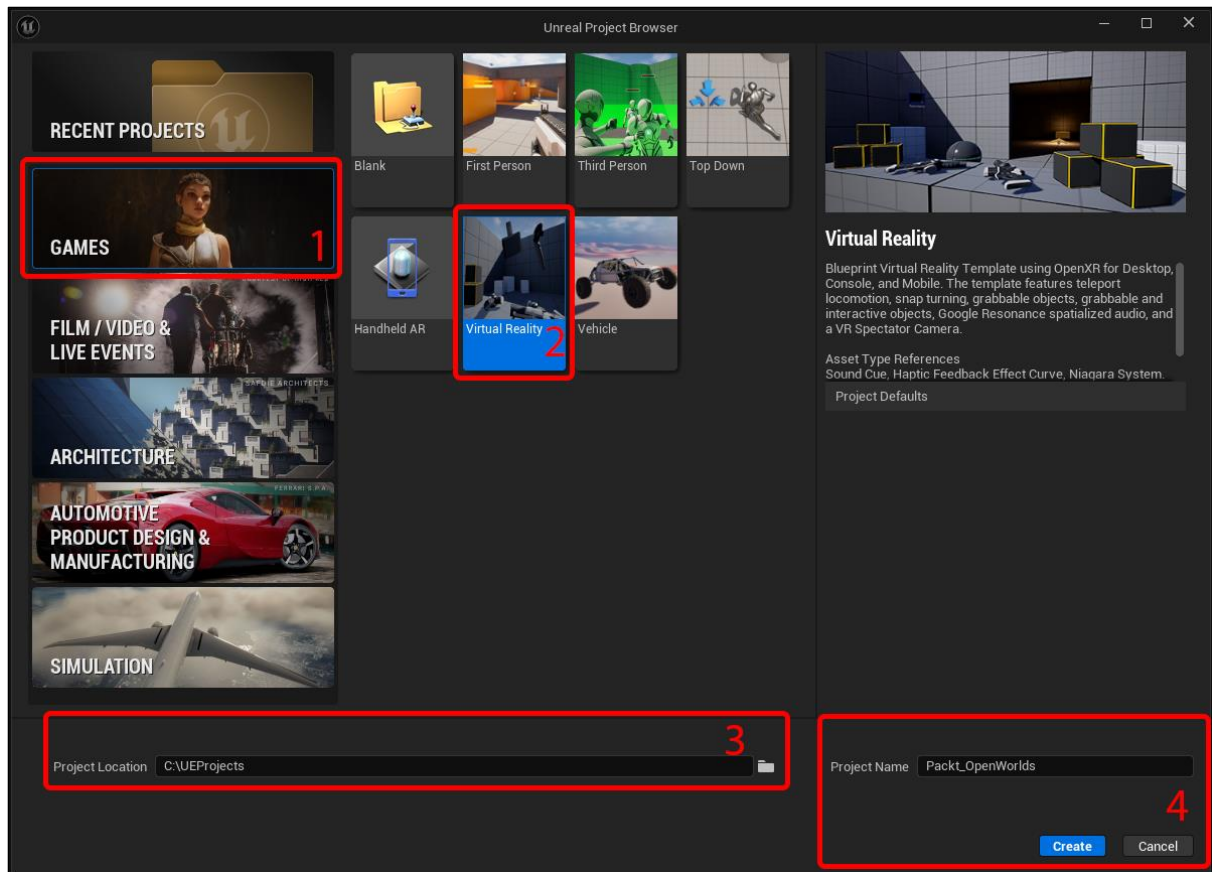
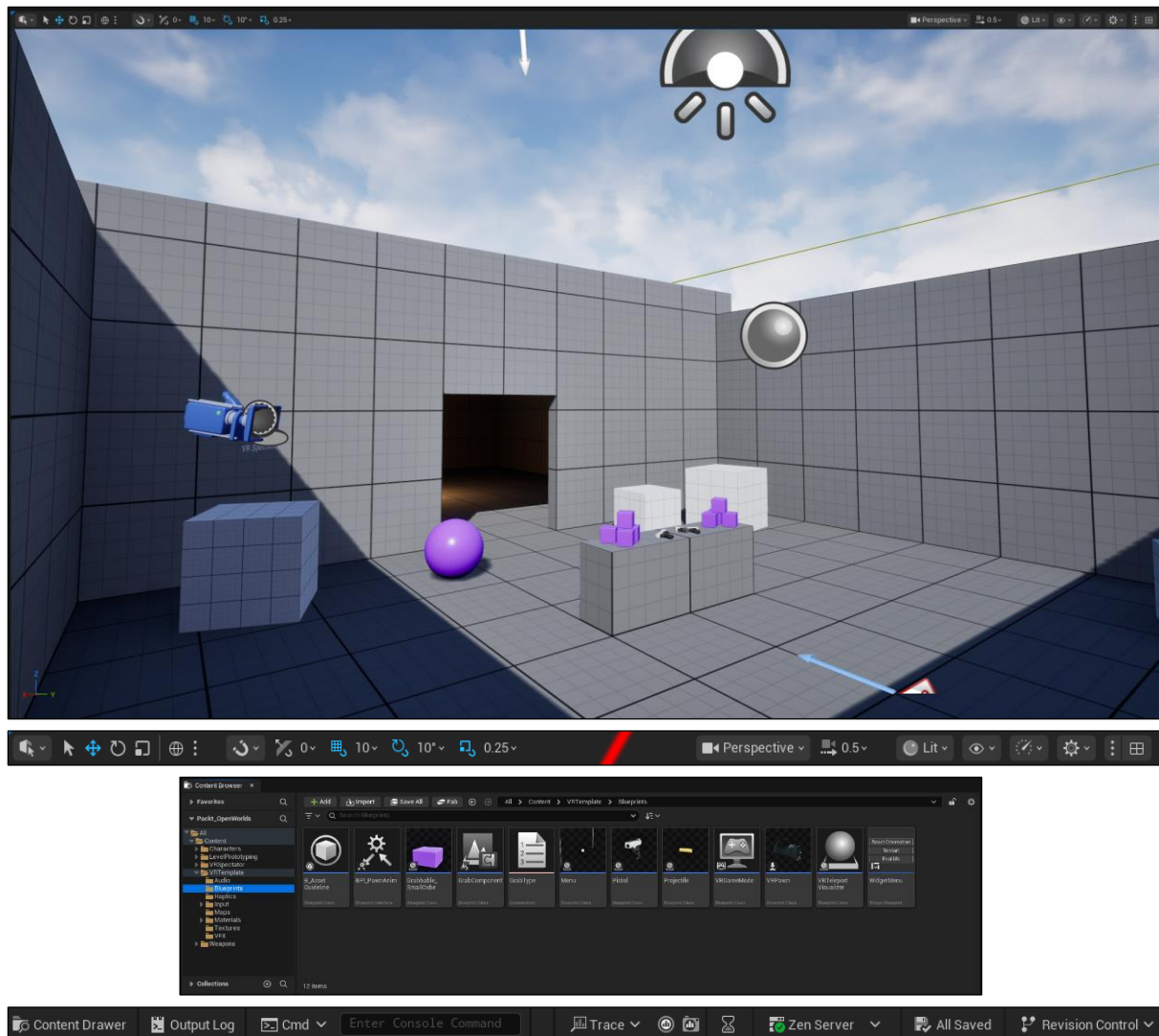


Chapter 1: Starting a Project in Unreal Engine







Outliner

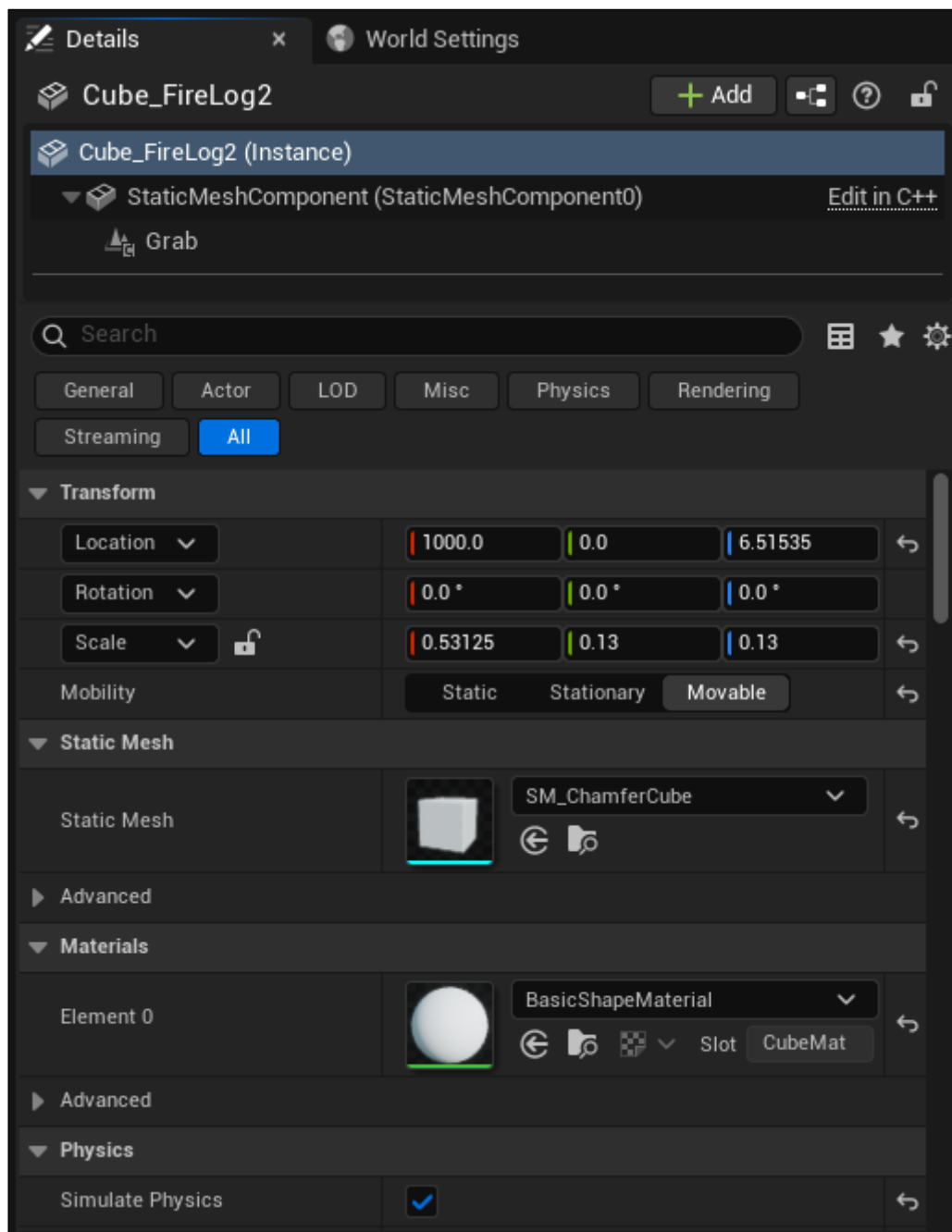
Levels

Layers

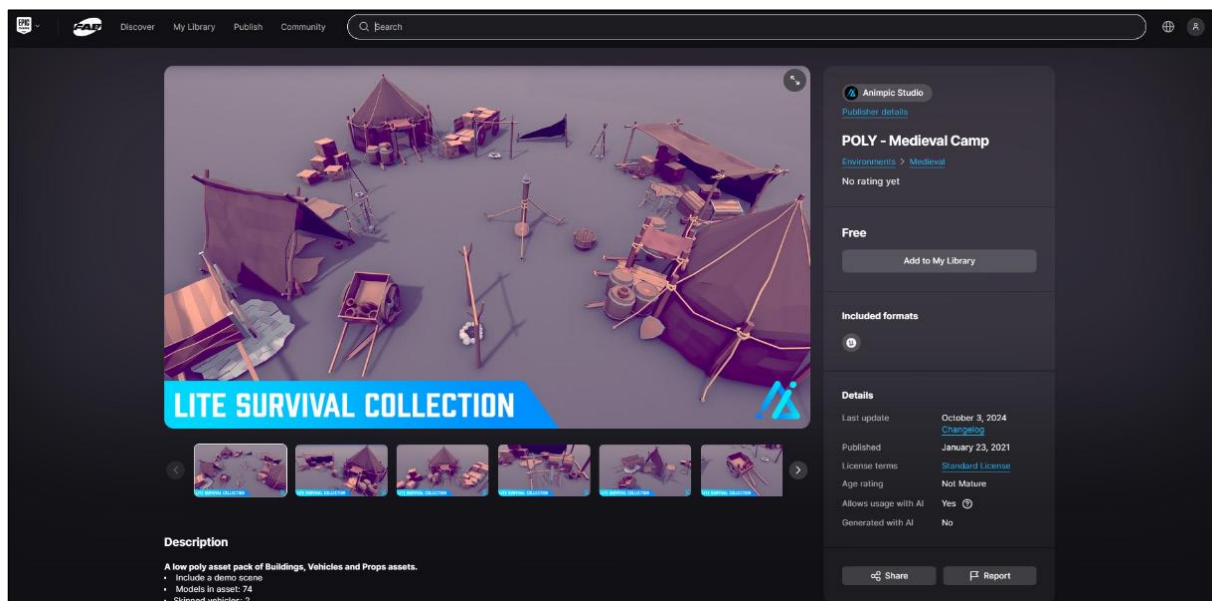
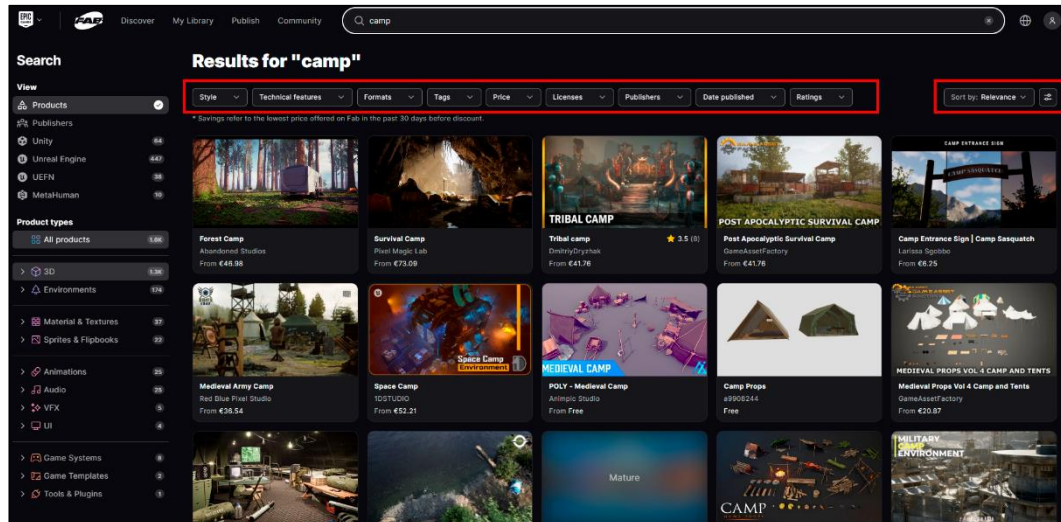
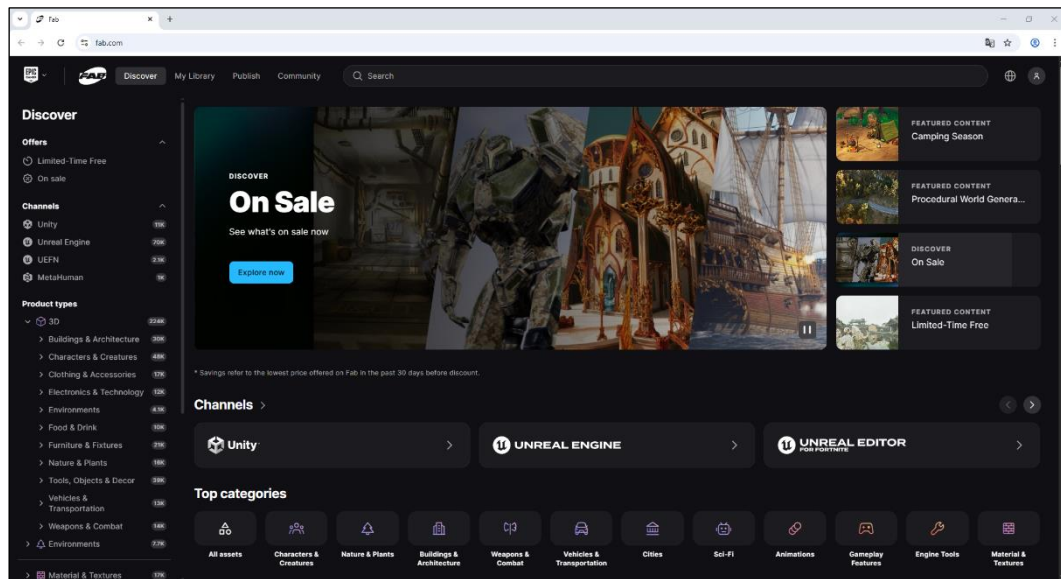
Search...

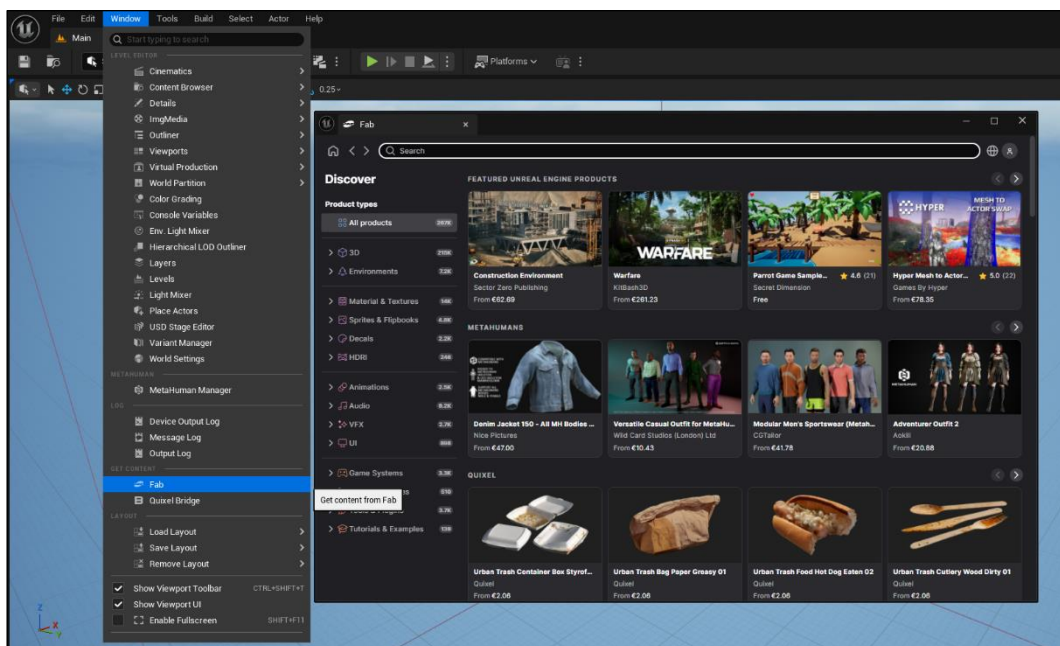
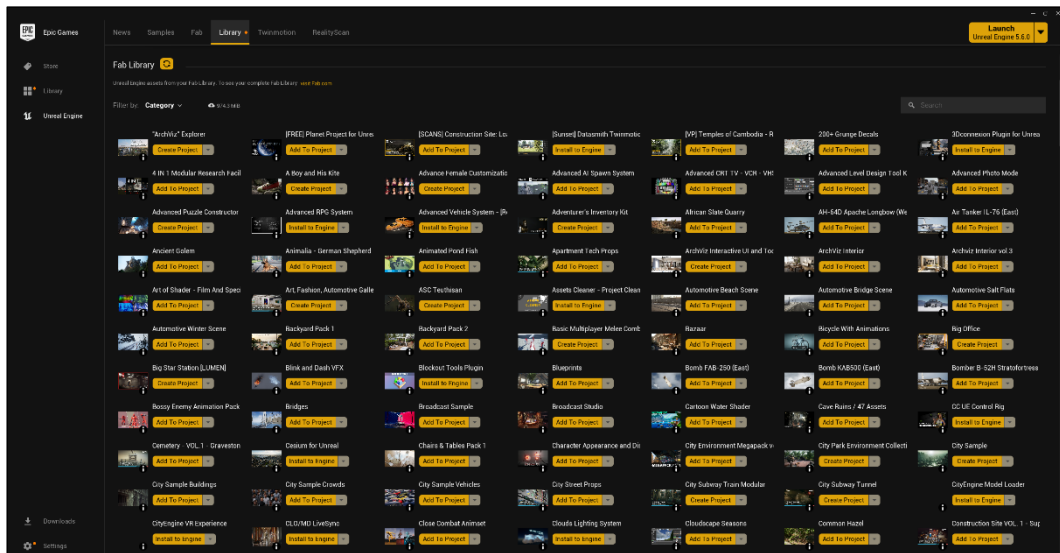
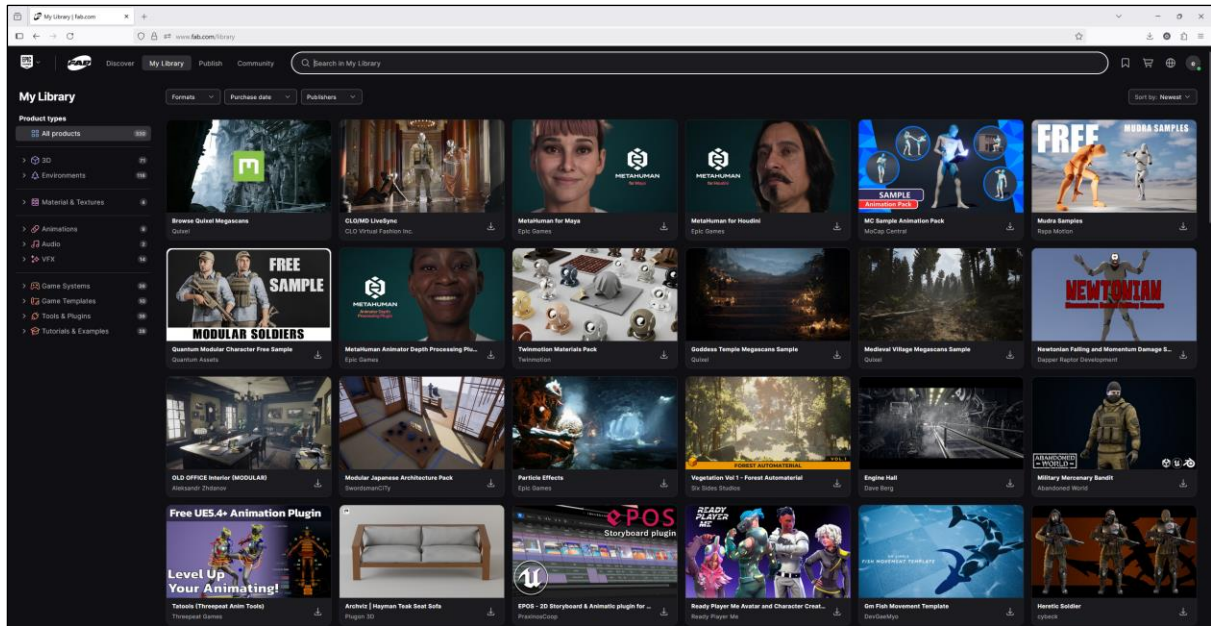
Item Label	Type
VRTemplateMap (Editor)	World
BP_VRSpectator	Edit VRSpectator
Cube	StaticMeshActor
Cube2	StaticMeshActor
Cube3	StaticMeshActor
Cube4	StaticMeshActor
Cube5	StaticMeshActor
Cube6	StaticMeshActor
Cube7	StaticMeshActor
Cube9	StaticMeshActor
Cube13	StaticMeshActor
Cube_FireLog	StaticMeshActor
Cube_FireLog1	StaticMeshActor
Cube_FireLog2	StaticMeshActor
DirectionalLight	DirectionalLight
Fire_Cue	AmbientSound
Floor	StaticMeshActor
GrabActor_StaticMesh_Physics3	Edit Grabbable_SmallC
GrabActor_StaticMesh_Physics4	Edit Grabbable_SmallC
GrabActor_StaticMesh_Physics5	Edit Grabbable_SmallC
GrabActor_StaticMesh_Physics6	Edit Grabbable_SmallC
GrabActor_StaticMesh_Physics7	Edit Grabbable_SmallC
GrabActor_StaticMesh_Physics8	Edit Grabbable_SmallC

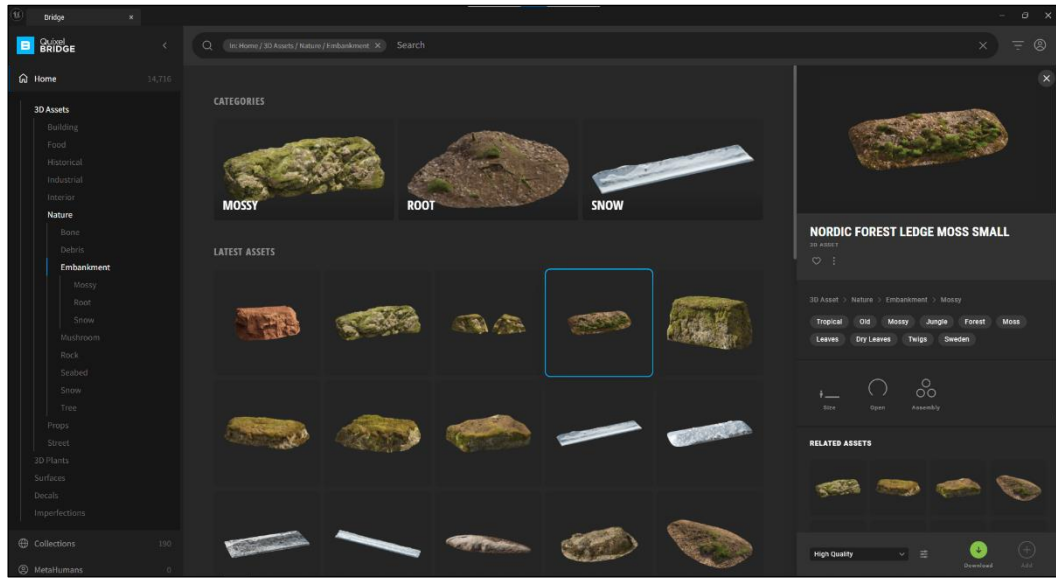
48 actors (1 selected)



Chapter 2: Quixel Bridge, Megascans, and Fab









OLD HAND DRILL

3D ASSET PURCHASED



3D Asset > Industrial > Hardware > Tool

Old

Weathered

Rusty

Dirty

Workshops

Garages

Industry

Toolbox

Poland

Rural



Size



Closed

RELATED ASSETS

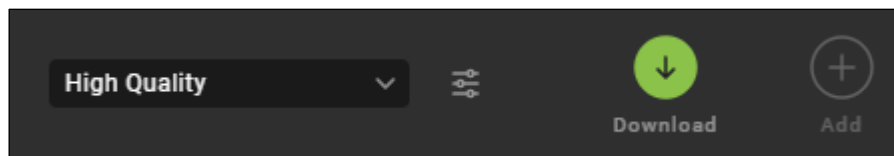
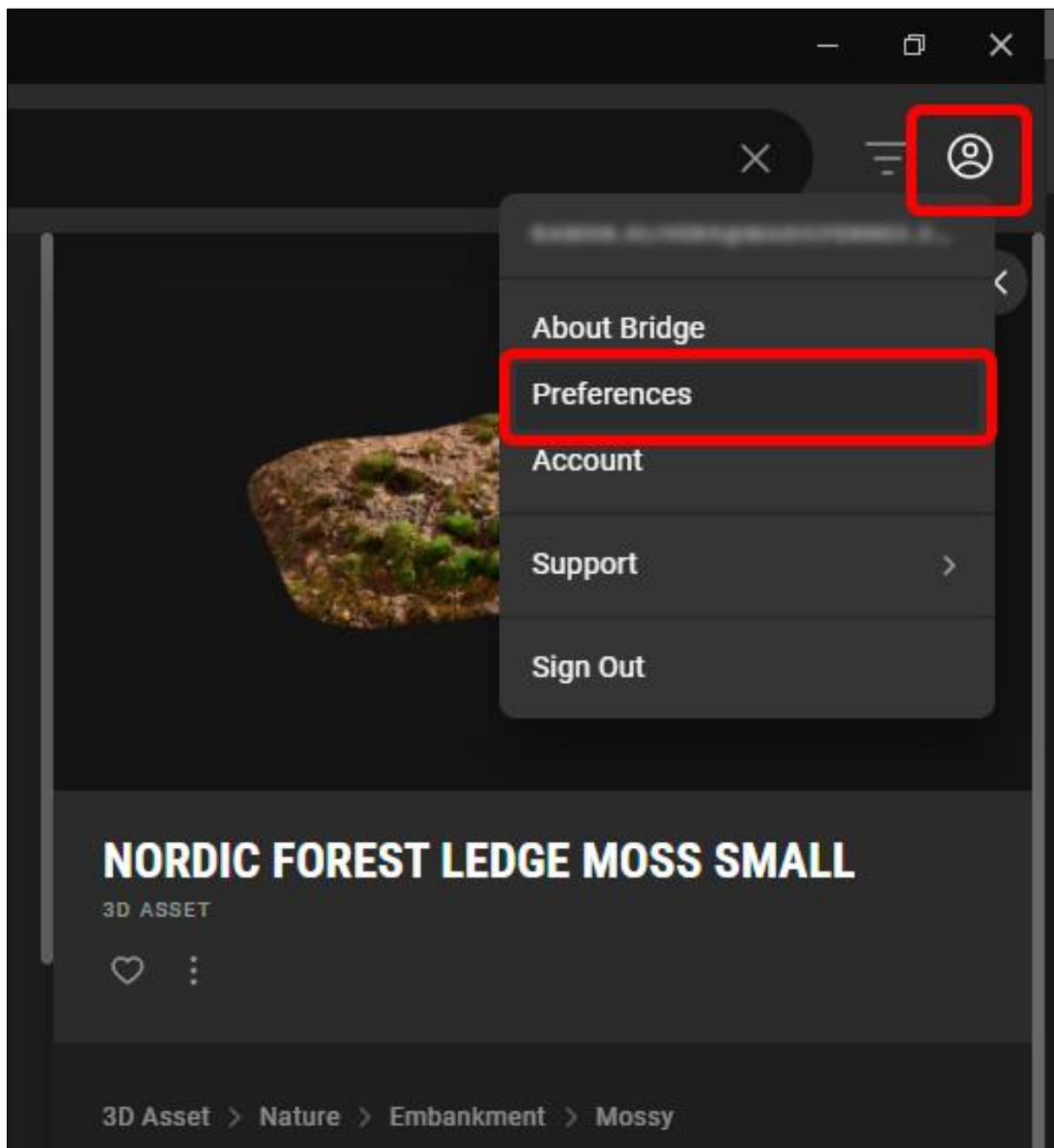
High Quality

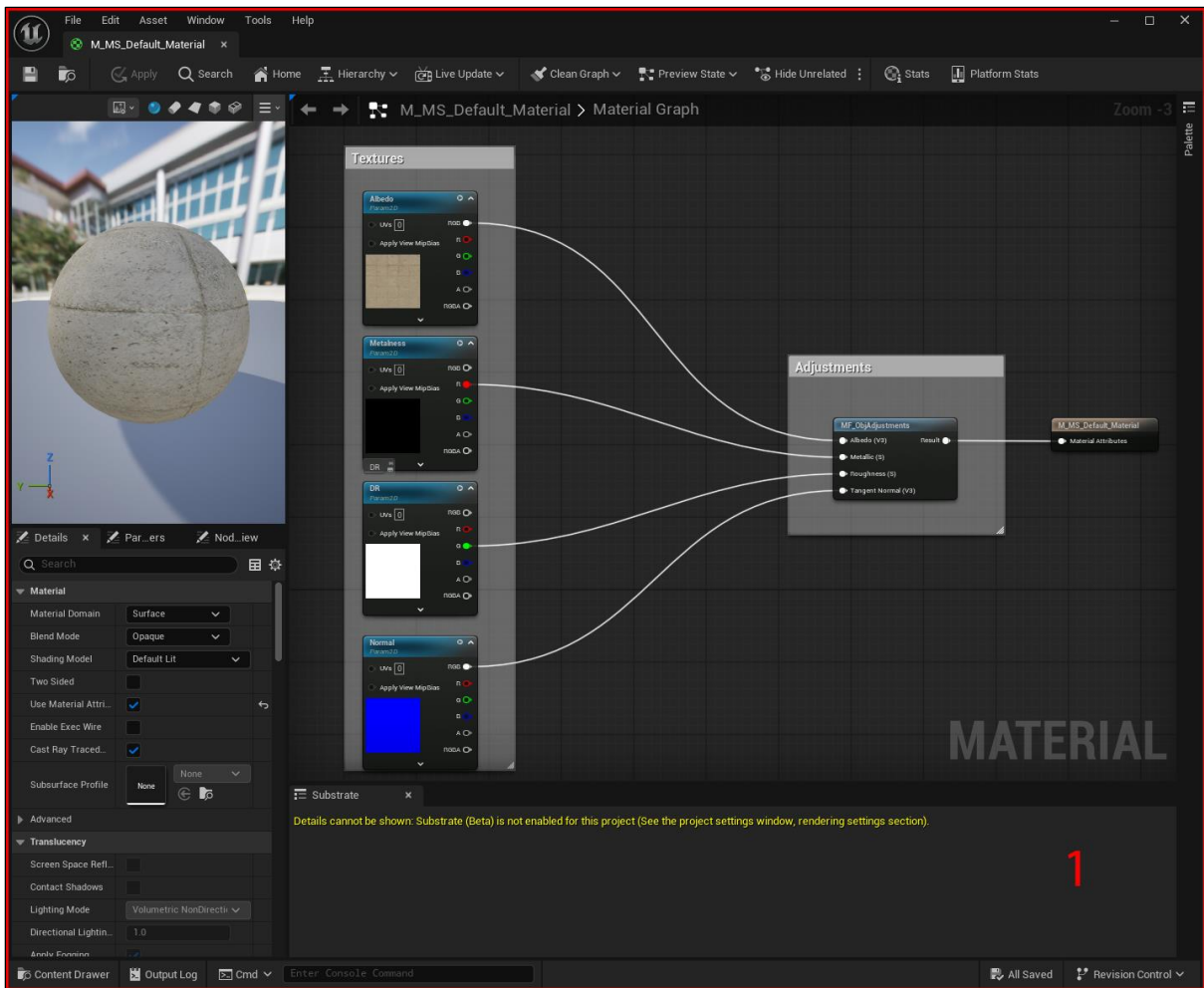


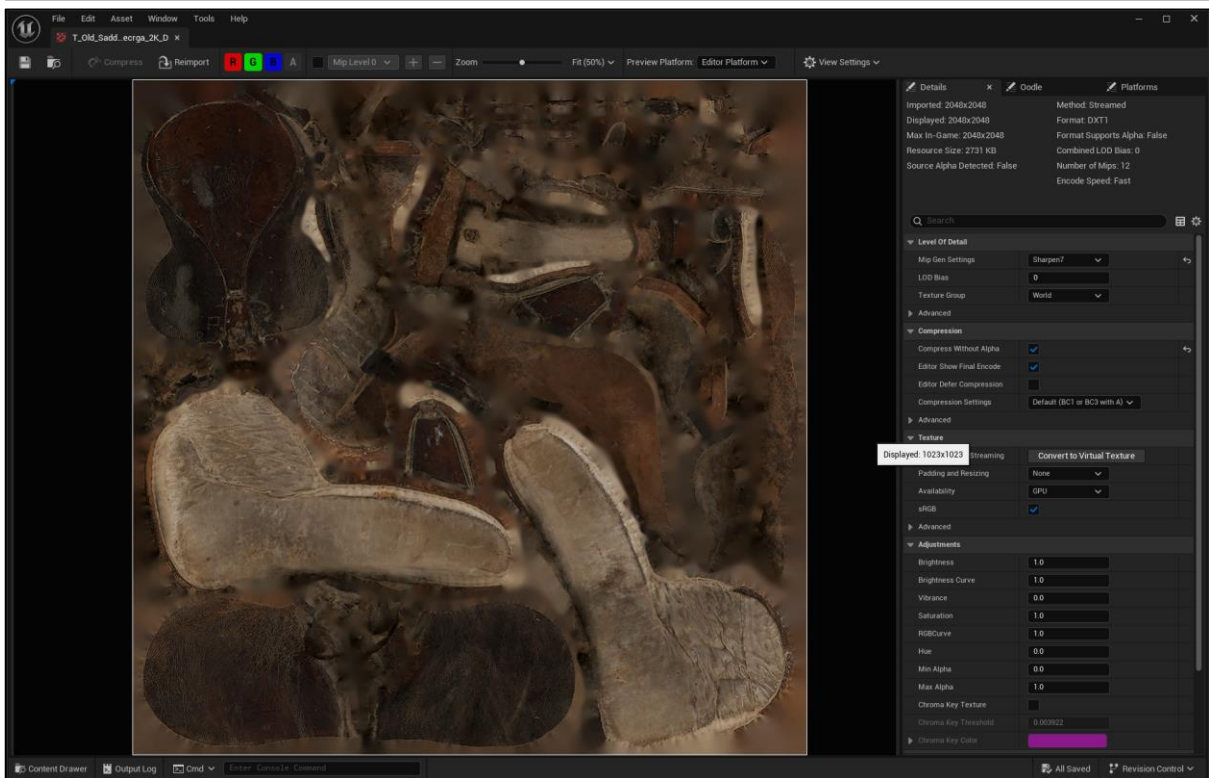
Download

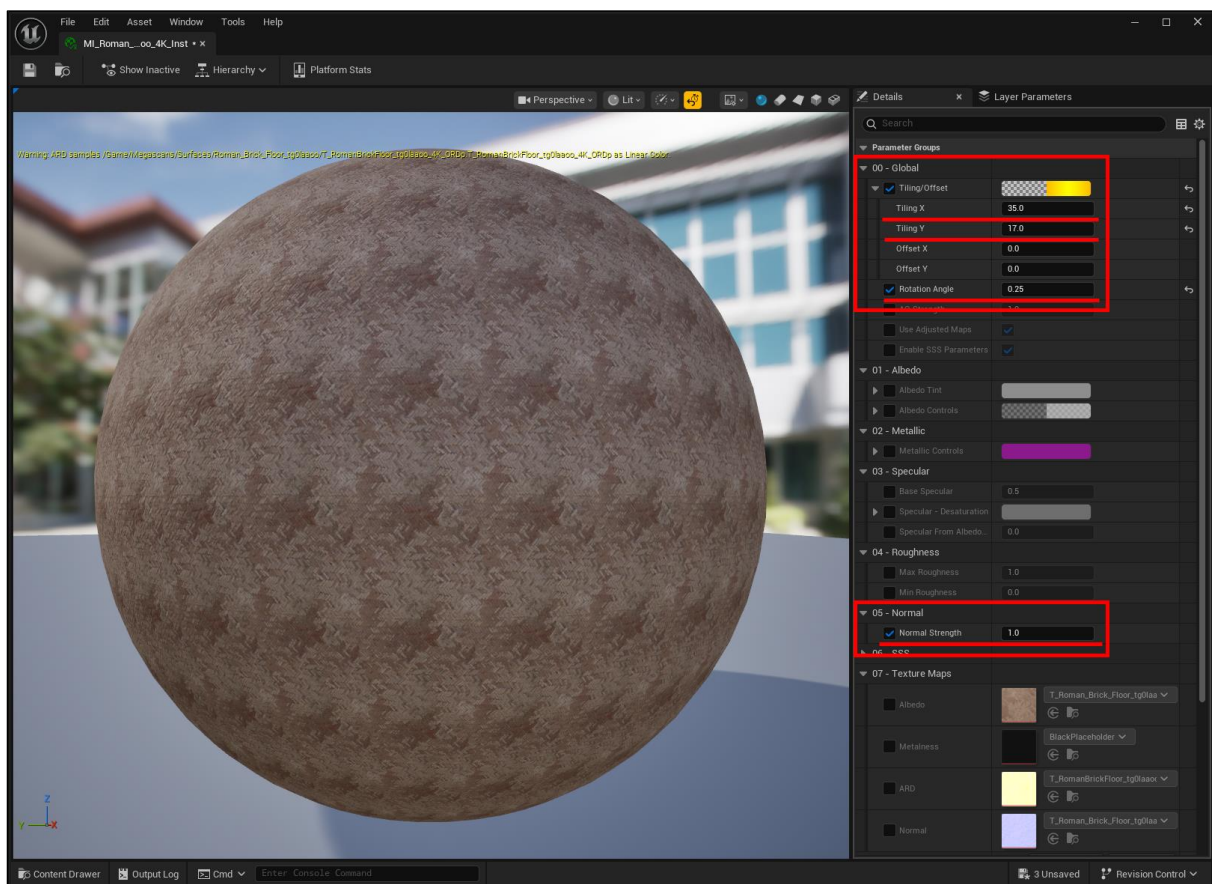
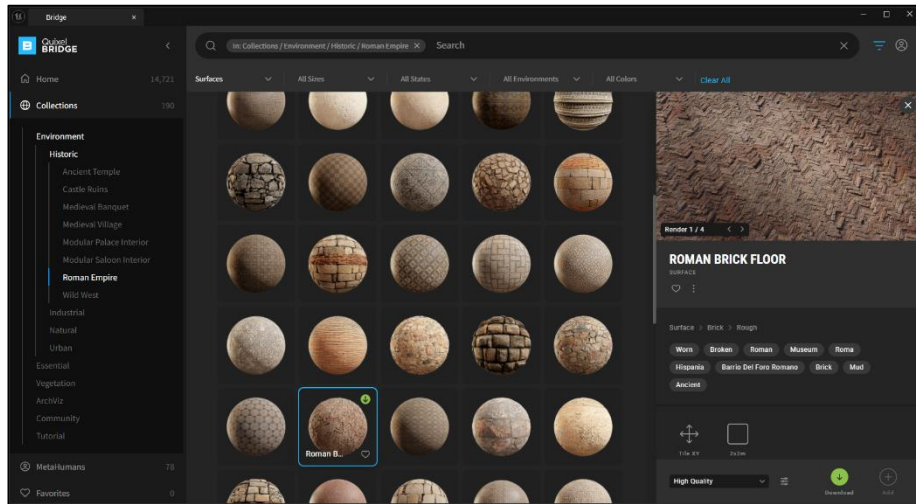


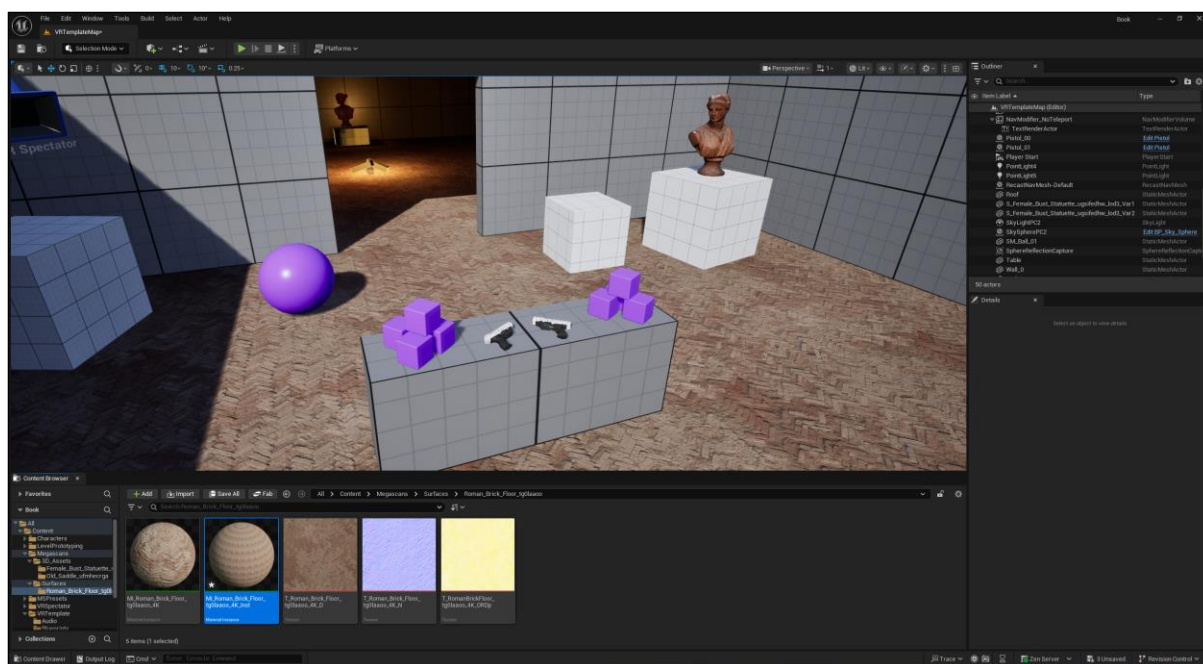
Add



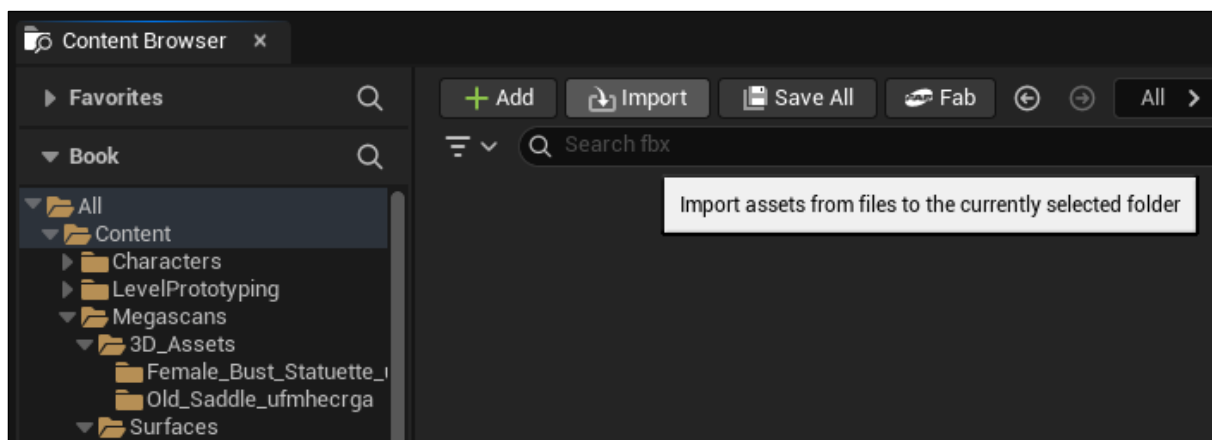
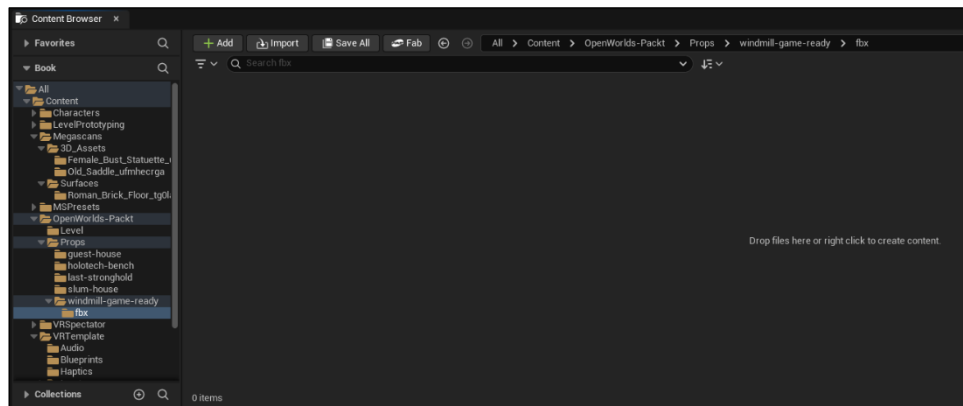


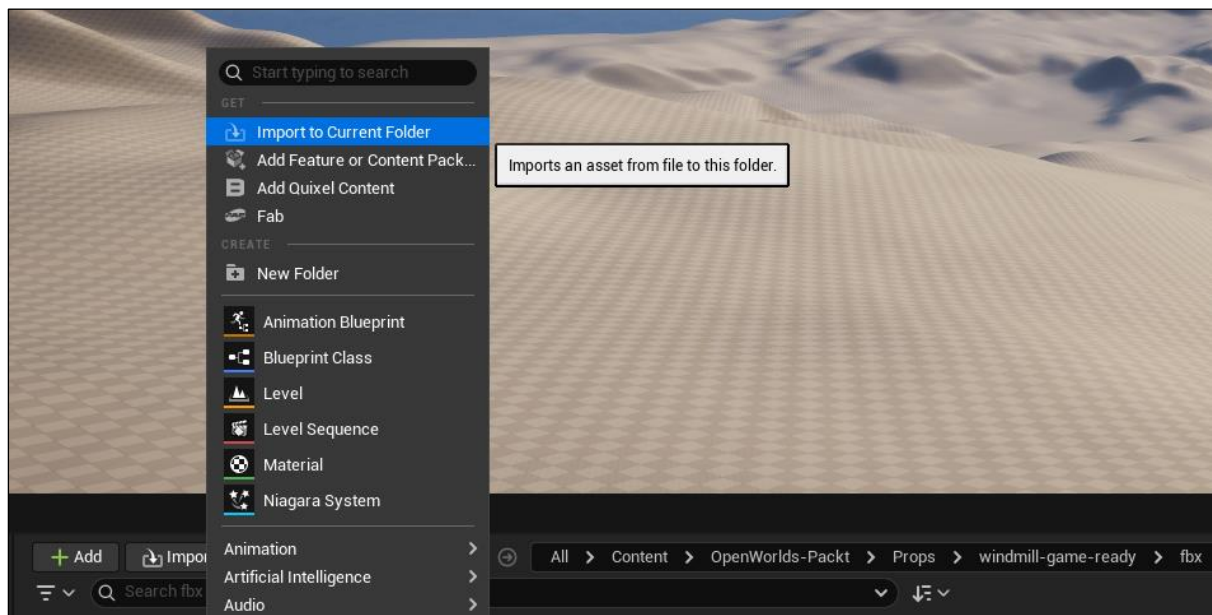
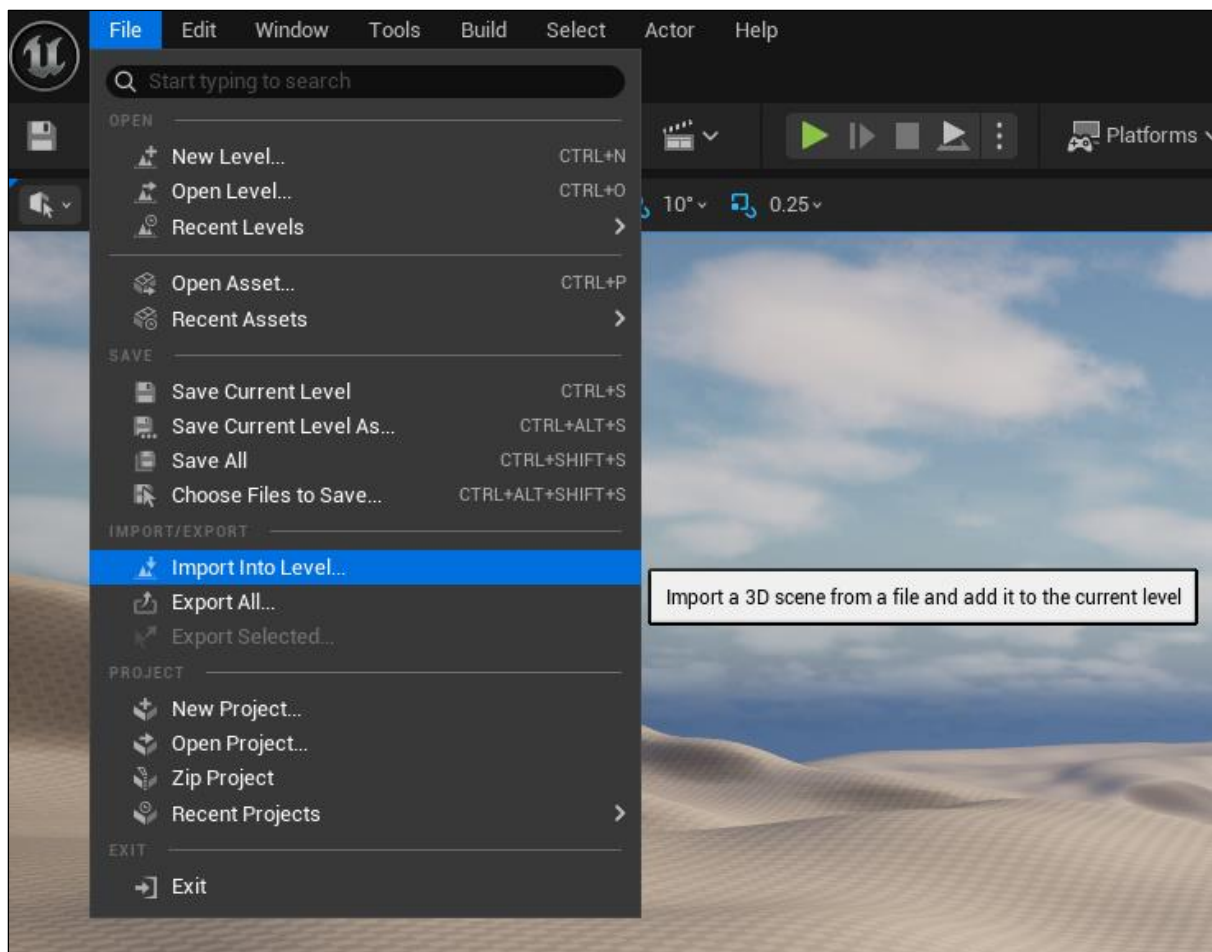


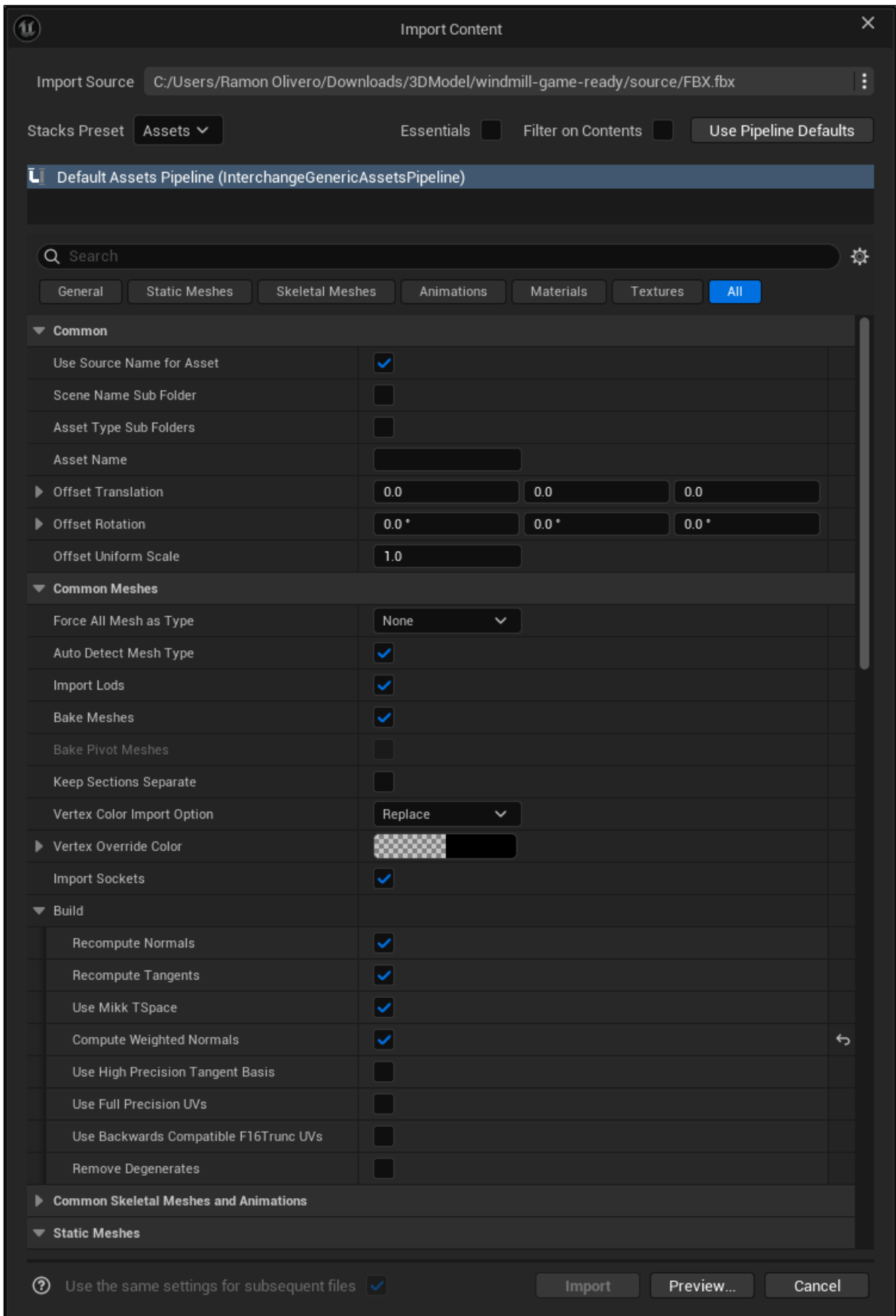


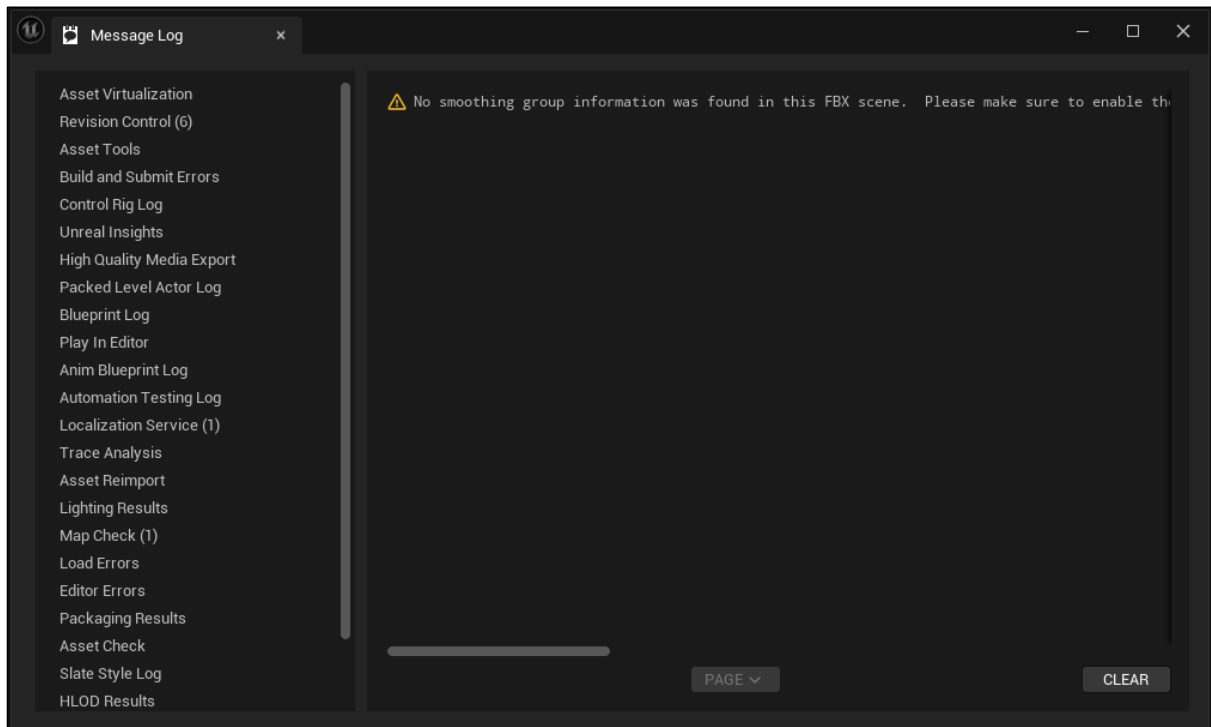
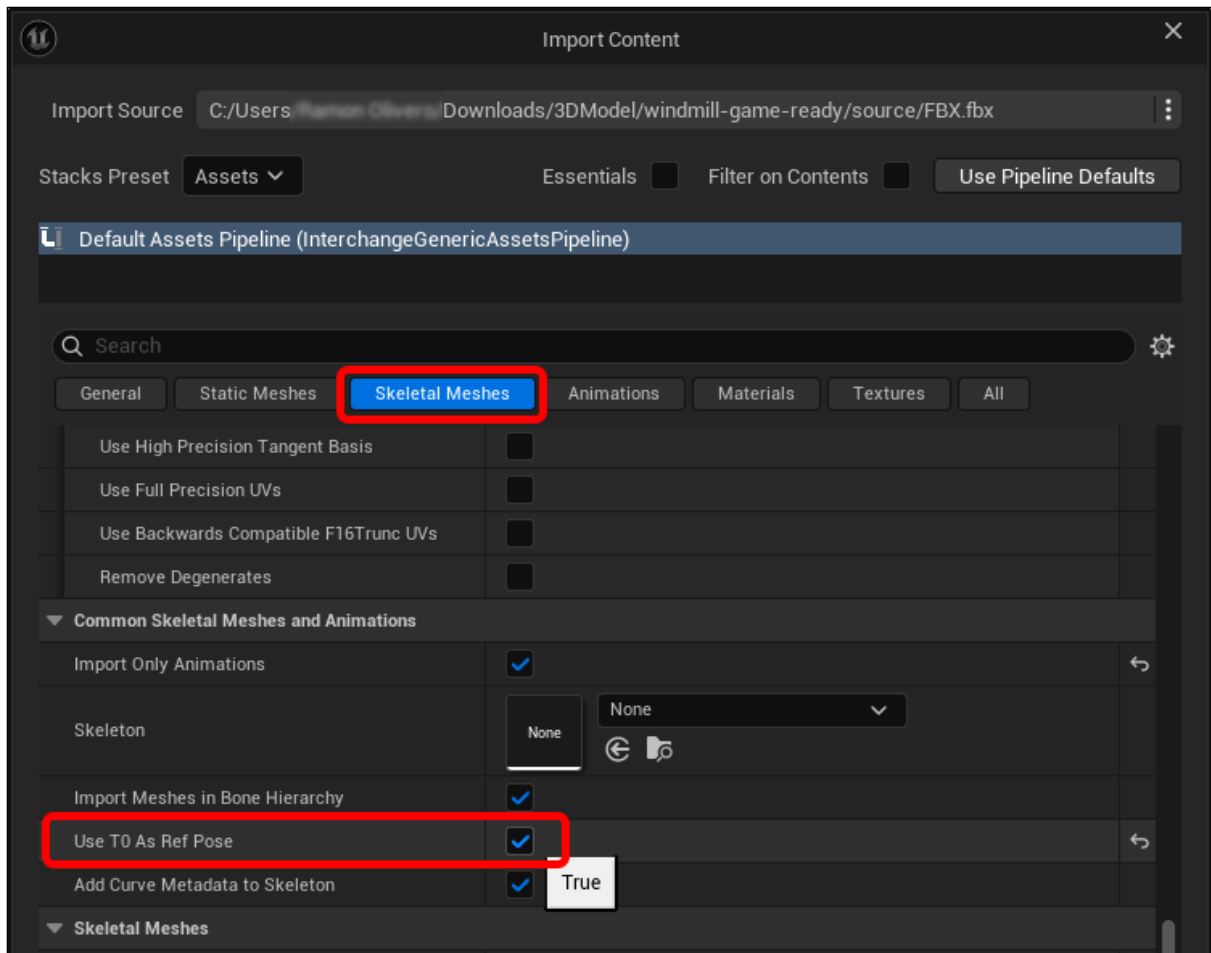


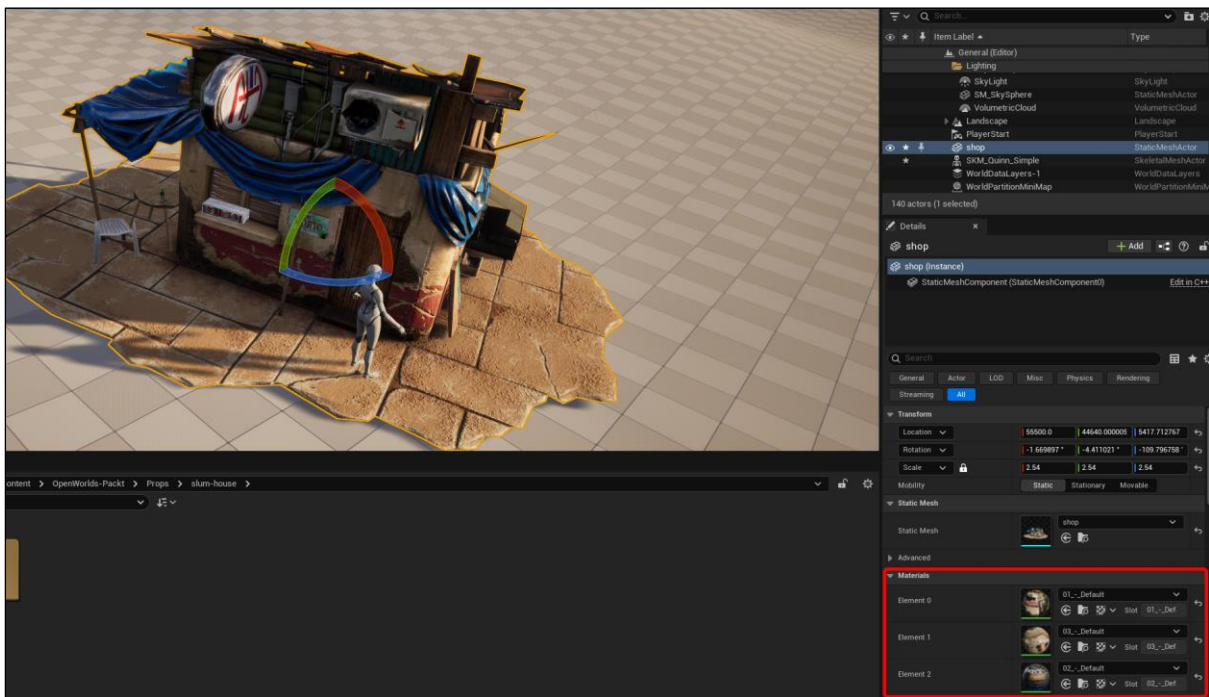
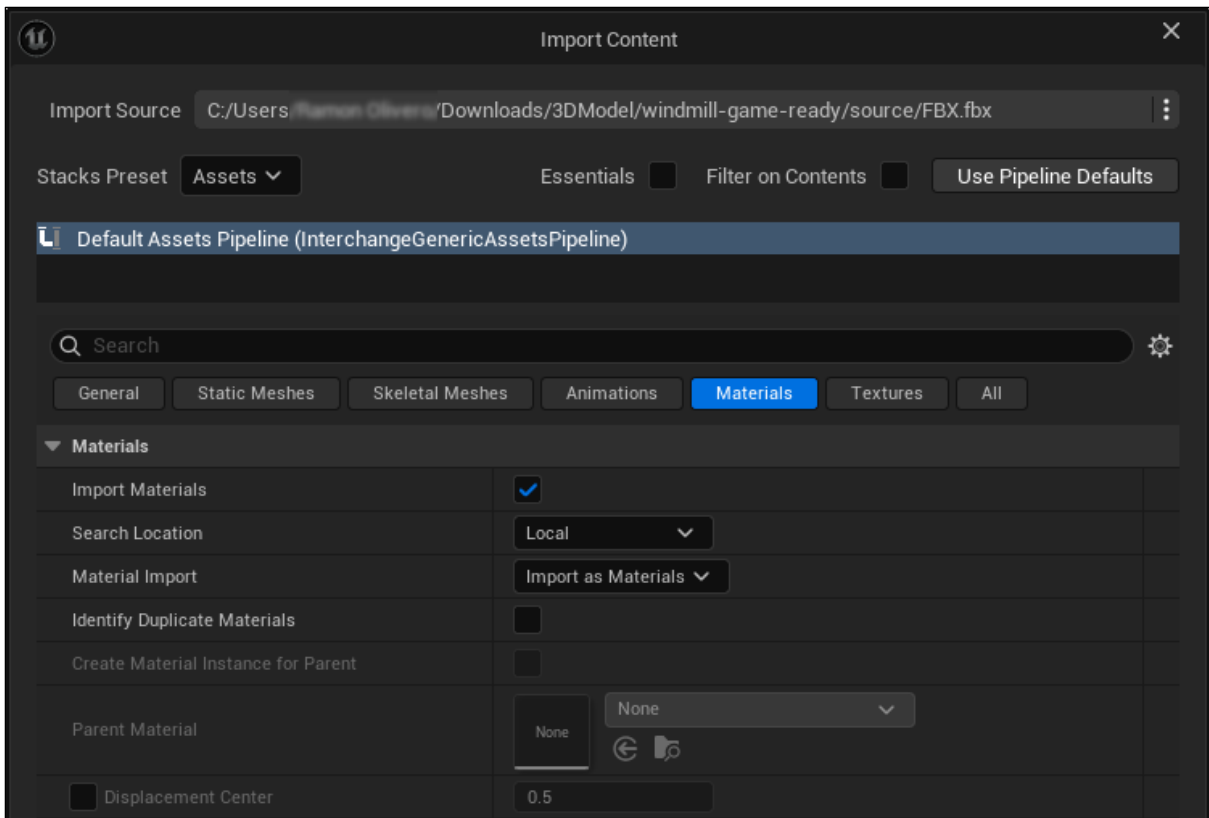
Chapter 3: Ingestion and Static Meshes

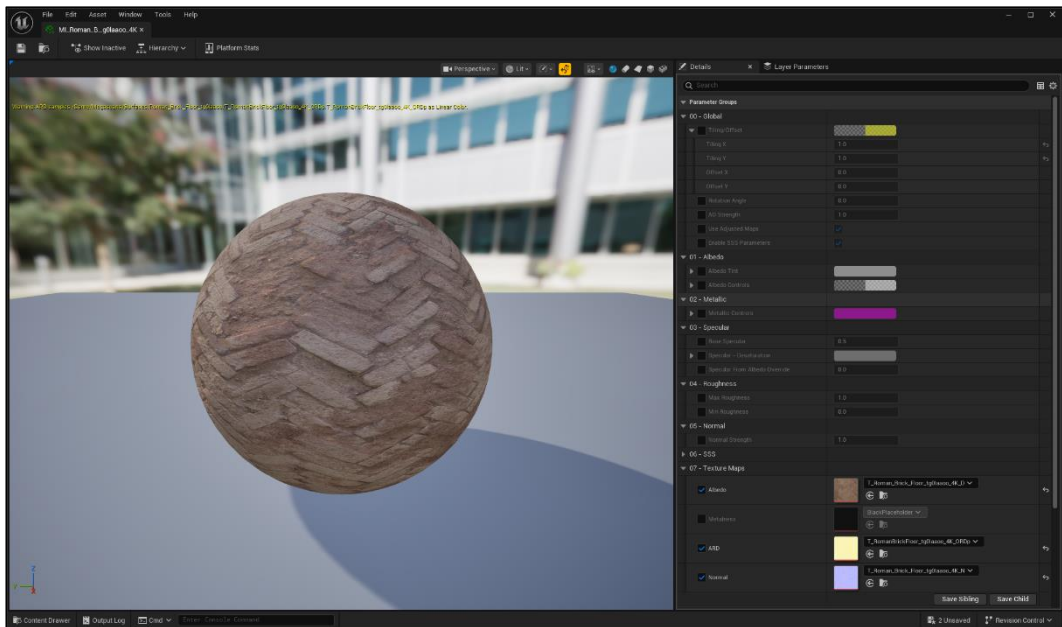
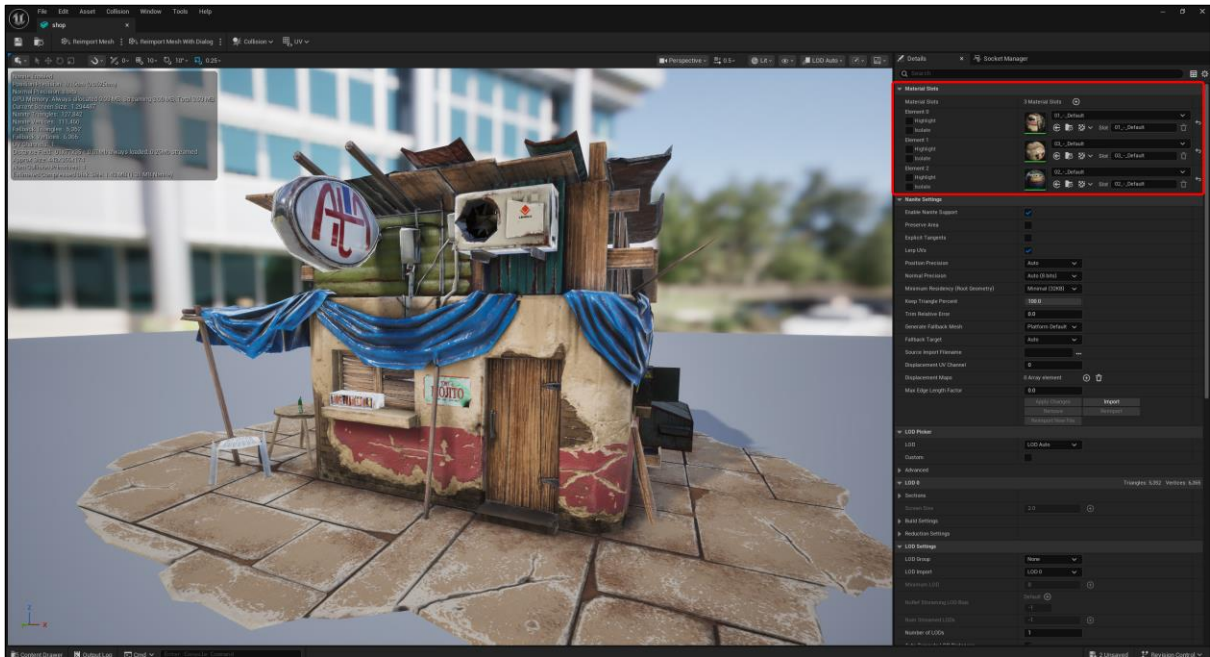


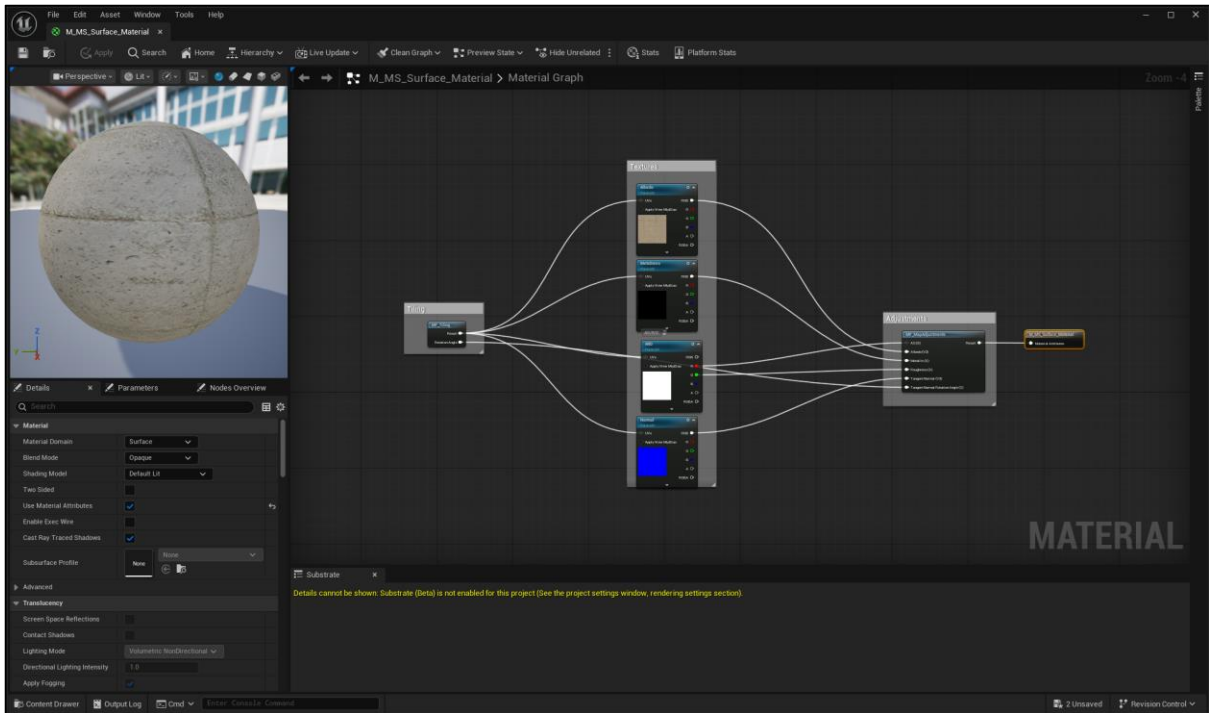












Sketchfab
EXPLORE
BUY 3D MODELS
FOR BUSINESS
windmill game ready

02:48
Windy day

Windmill (game ready)

3D Model

FrancisLem.
FOLLOW

11.3k
34k
1.4k

[Download 3D Model](#)
+ Add To
</> Embed
Share

Report

Triangles: 6.5k
Vertices: 4.9k
[More model information](#)



Download



Windmill (game ready)

This model is free

Licensing information

CC Attribution-NonCommercial-ShareAlike

Author must be credited. No commercial use. Modified versions must have the same license.

[LEARN MORE](#)

Credit the Creator

Windmill (game ready) by FrancisLam. is licensed under CC Attribution-NonCommercial-ShareAlike

[COPY CREDITS](#)

Available downloads

fbx Original format

.fbx 23MB

[DOWNLOAD](#)

USDZ Converted format

.usdz 13MB

[DOWNLOAD](#)

glTF Converted format [?](#)

.gltf 17MB

[DOWNLOAD](#)

GLB Converted format [?](#)

.gltf 17MB Texture size: 2k [?](#)

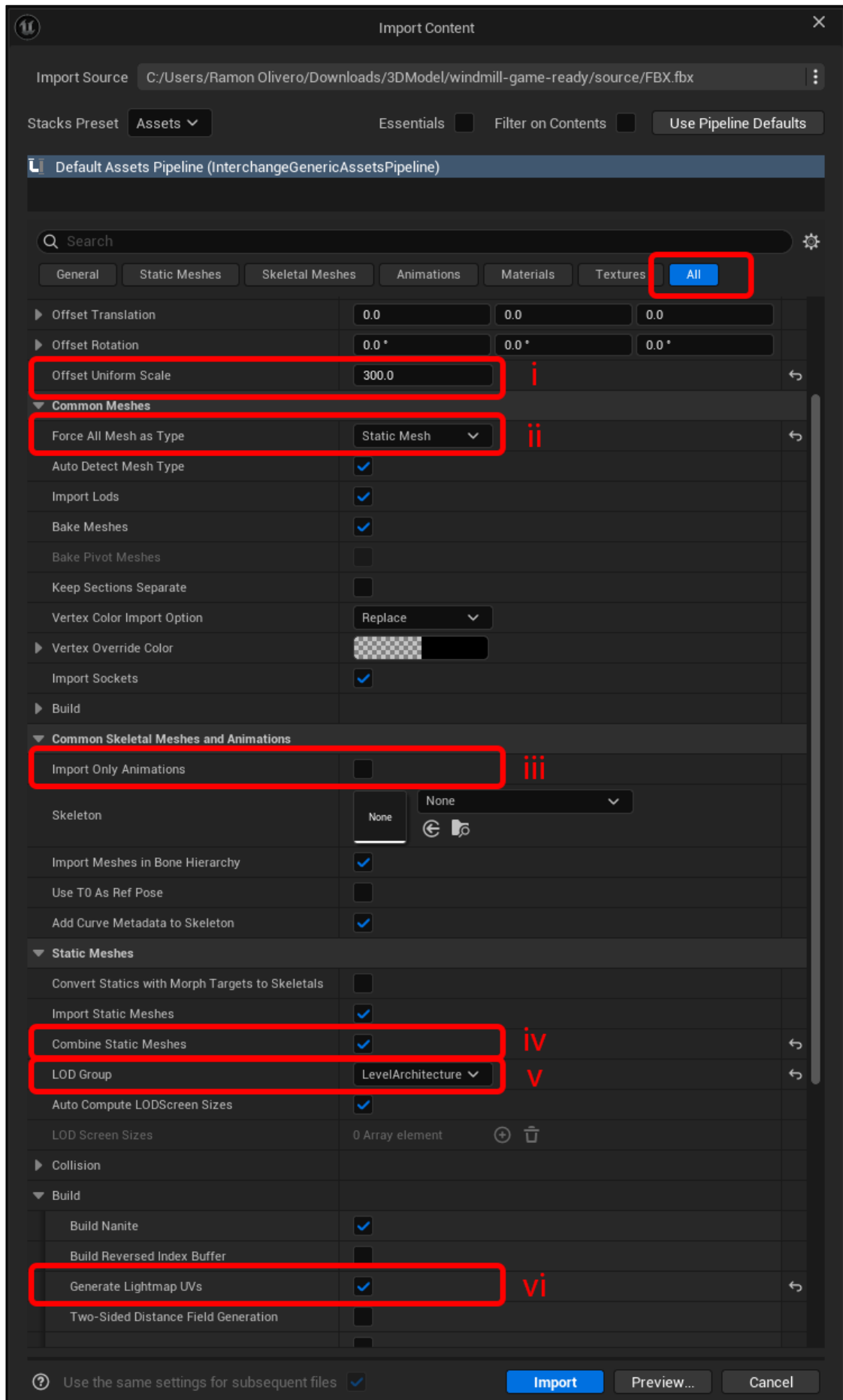
[DOWNLOAD](#)

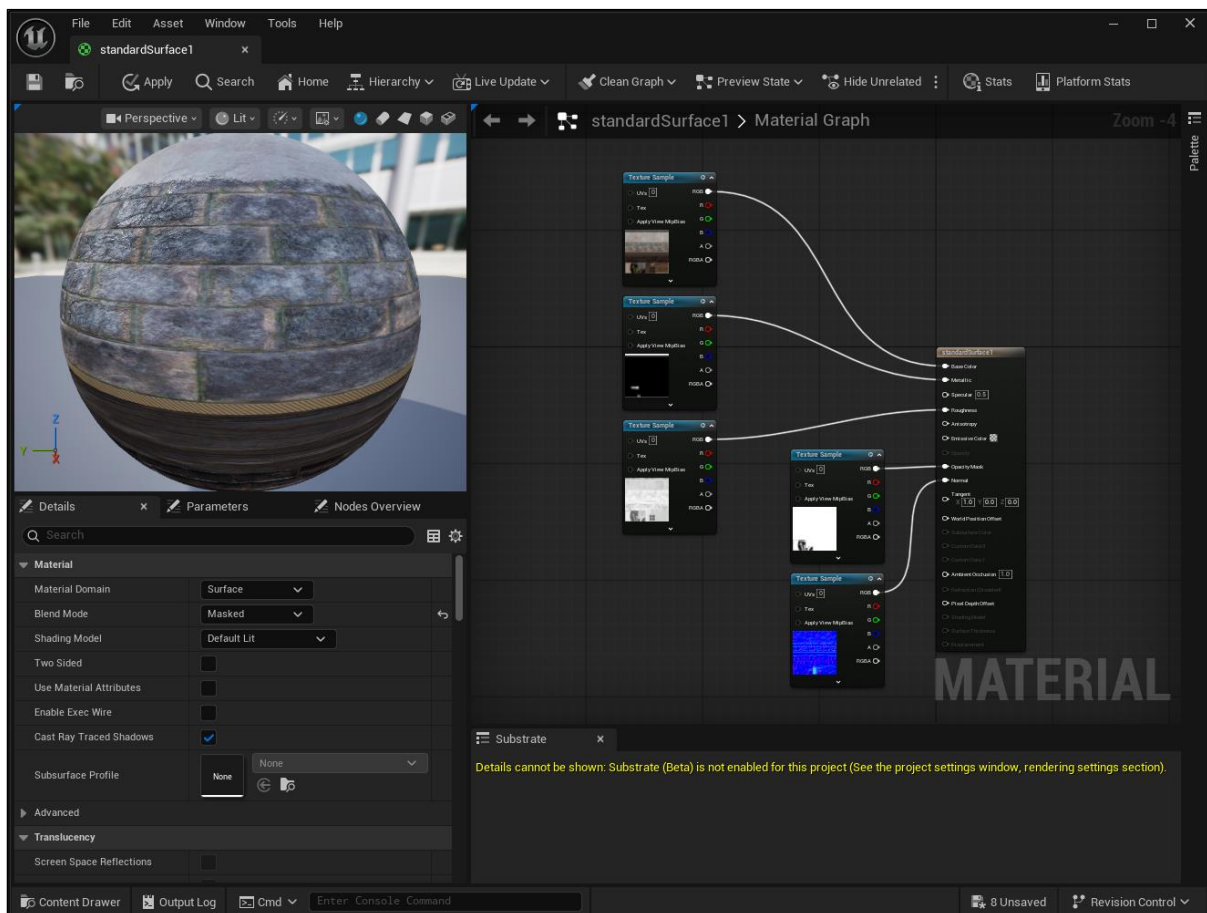
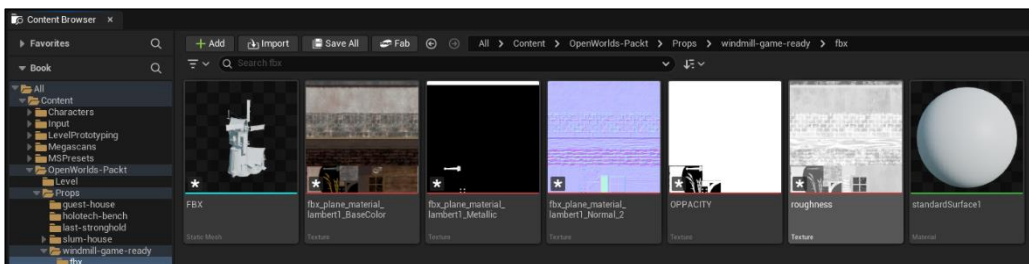
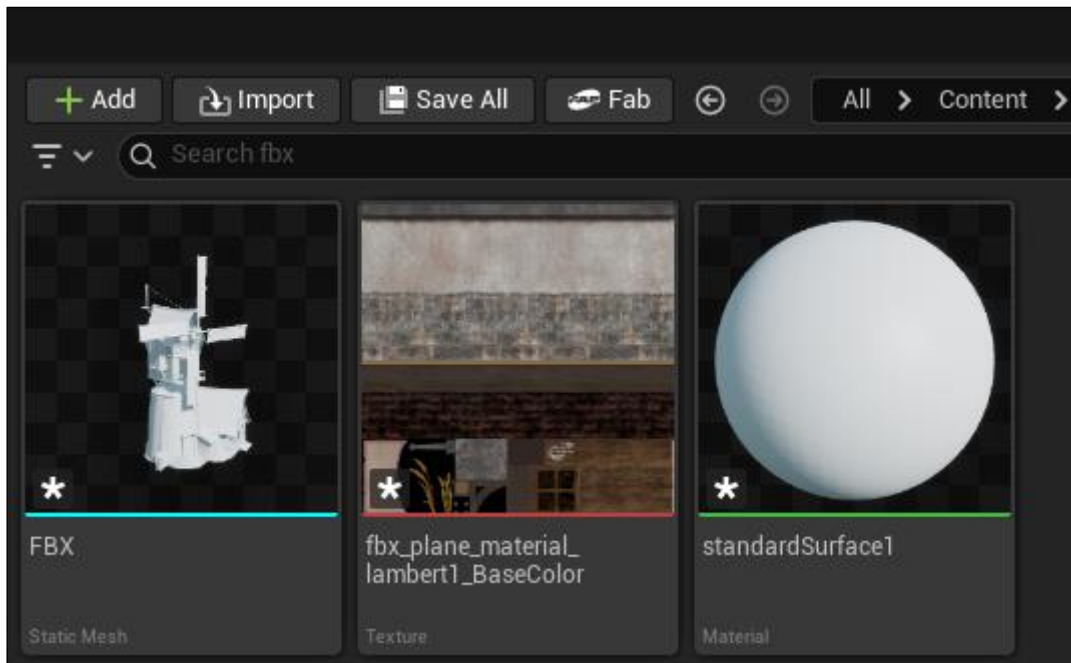
.glb 4MB Texture size: 1k [?](#)

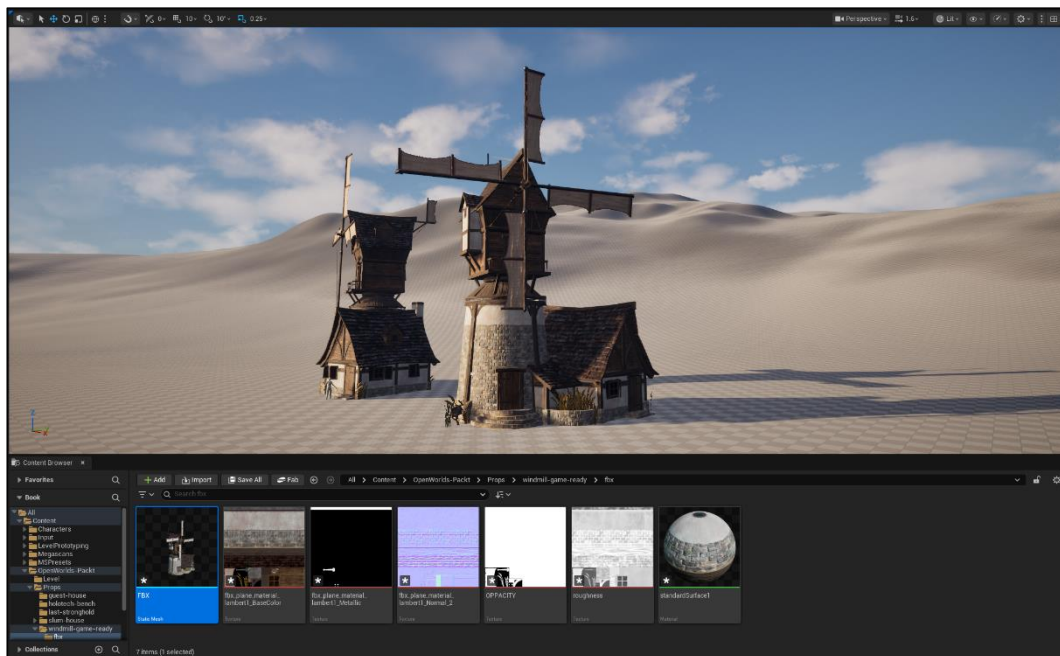
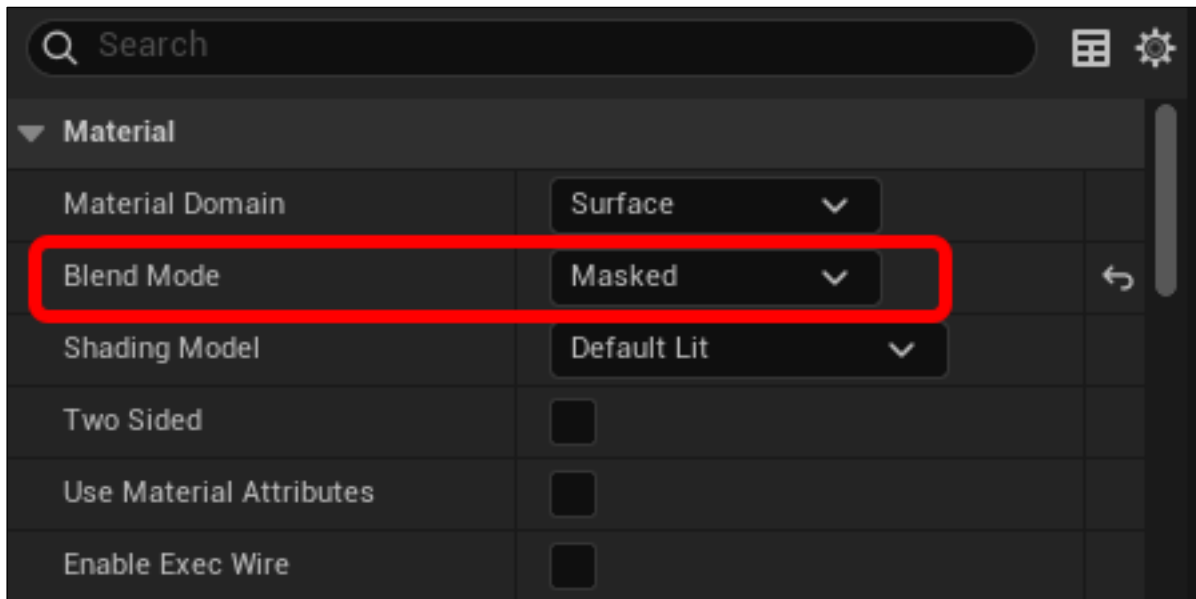
[DOWNLOAD](#)

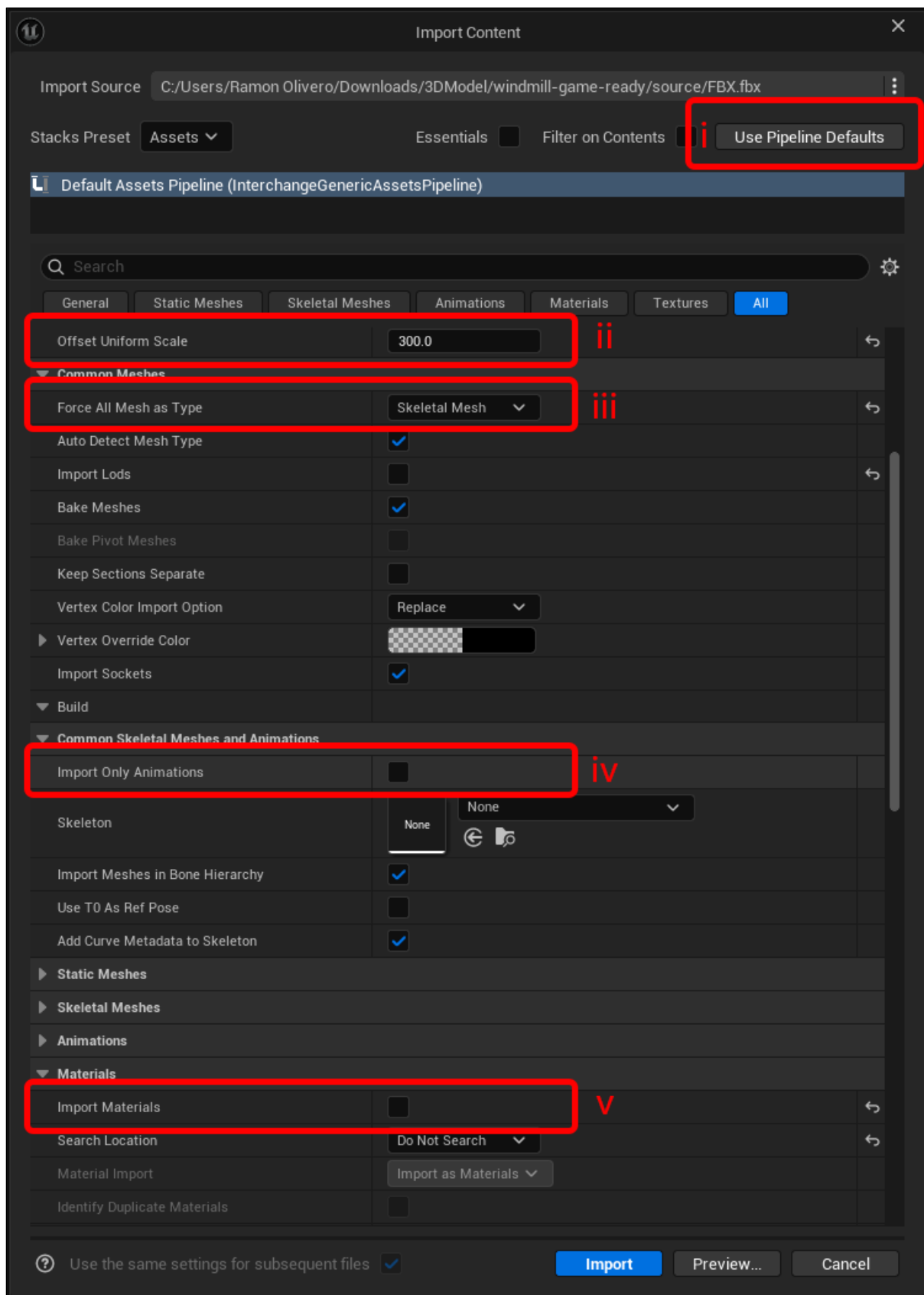
[?](#) Use [Importers](#) to search for 3D models directly from your favorite software.

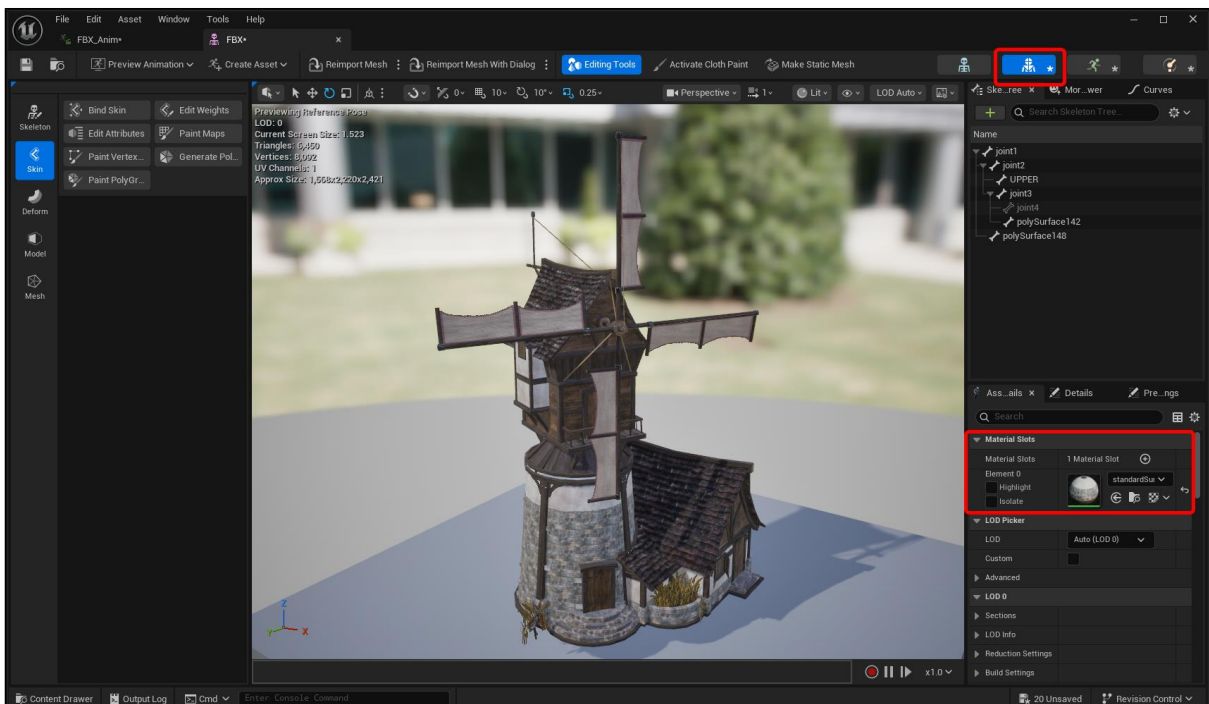
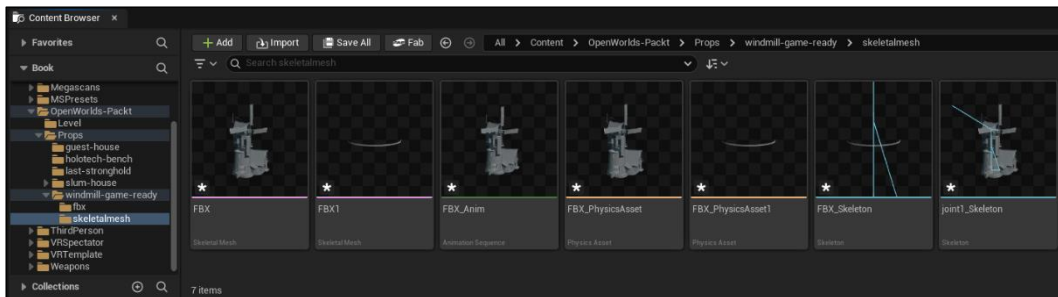
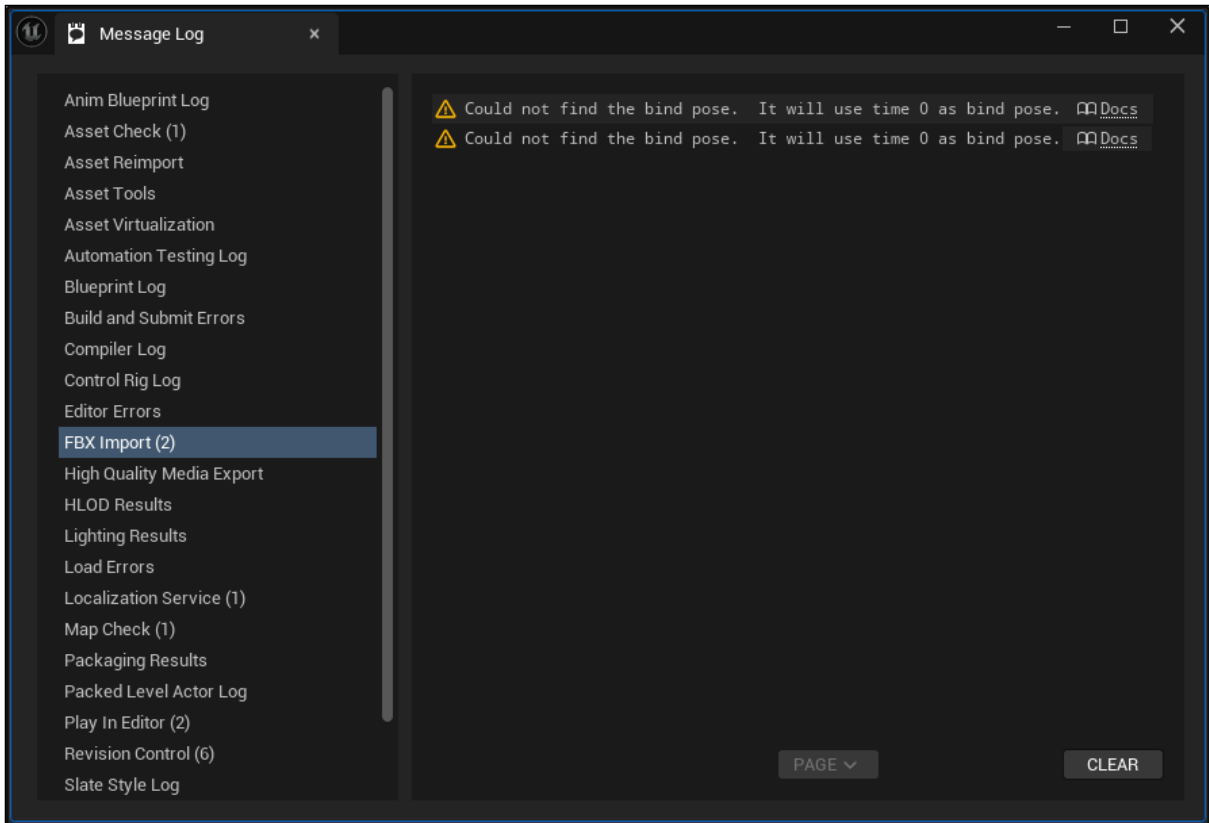
[?](#) Need a more flexible license and high-quality content?
[Explore the Sketchfab Store](#)

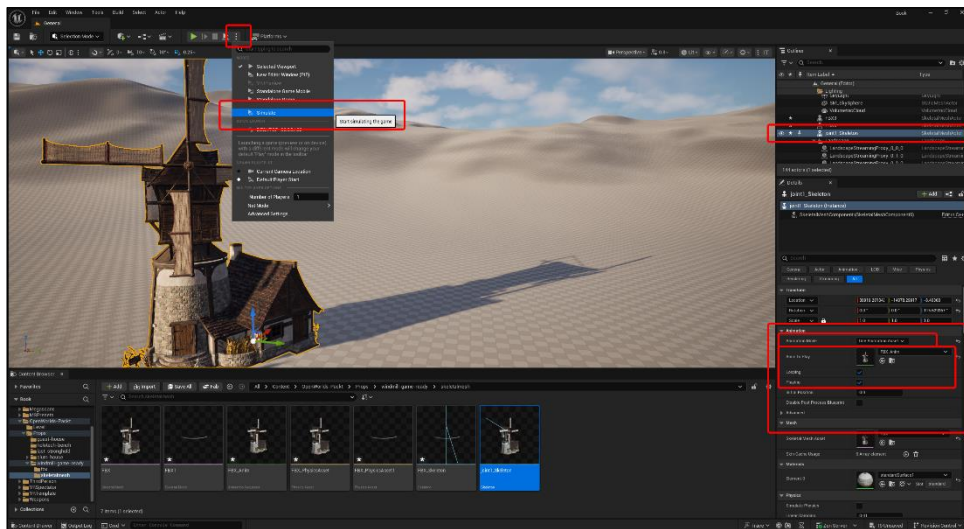
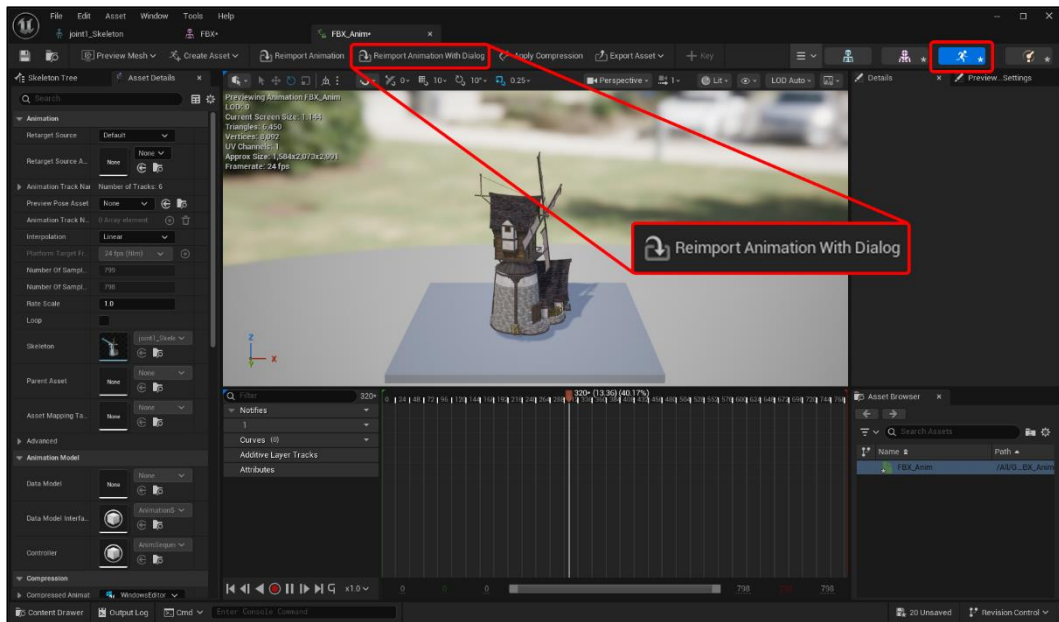
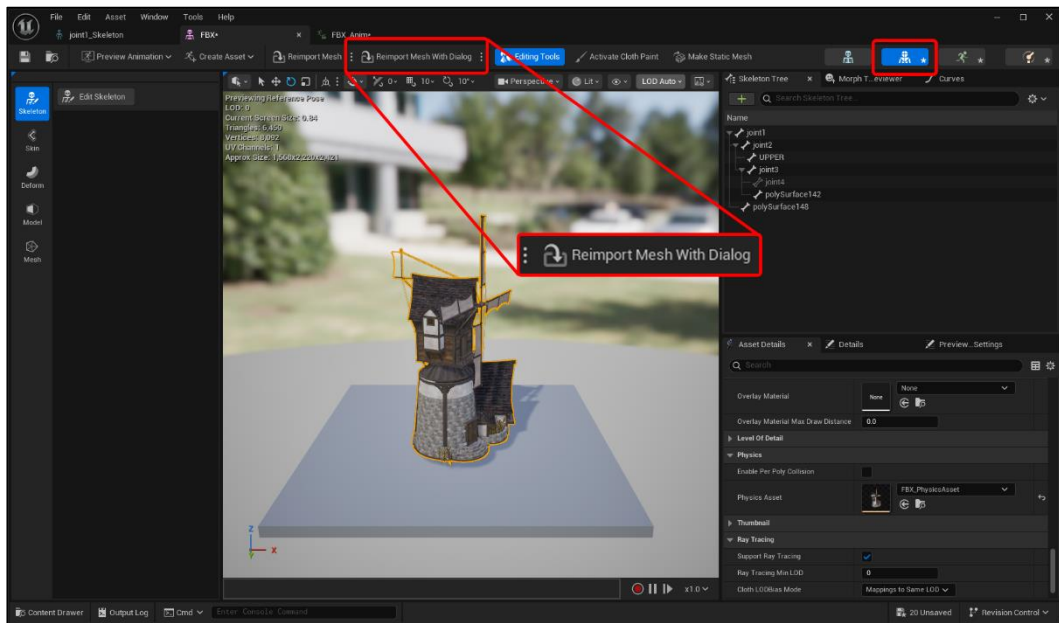




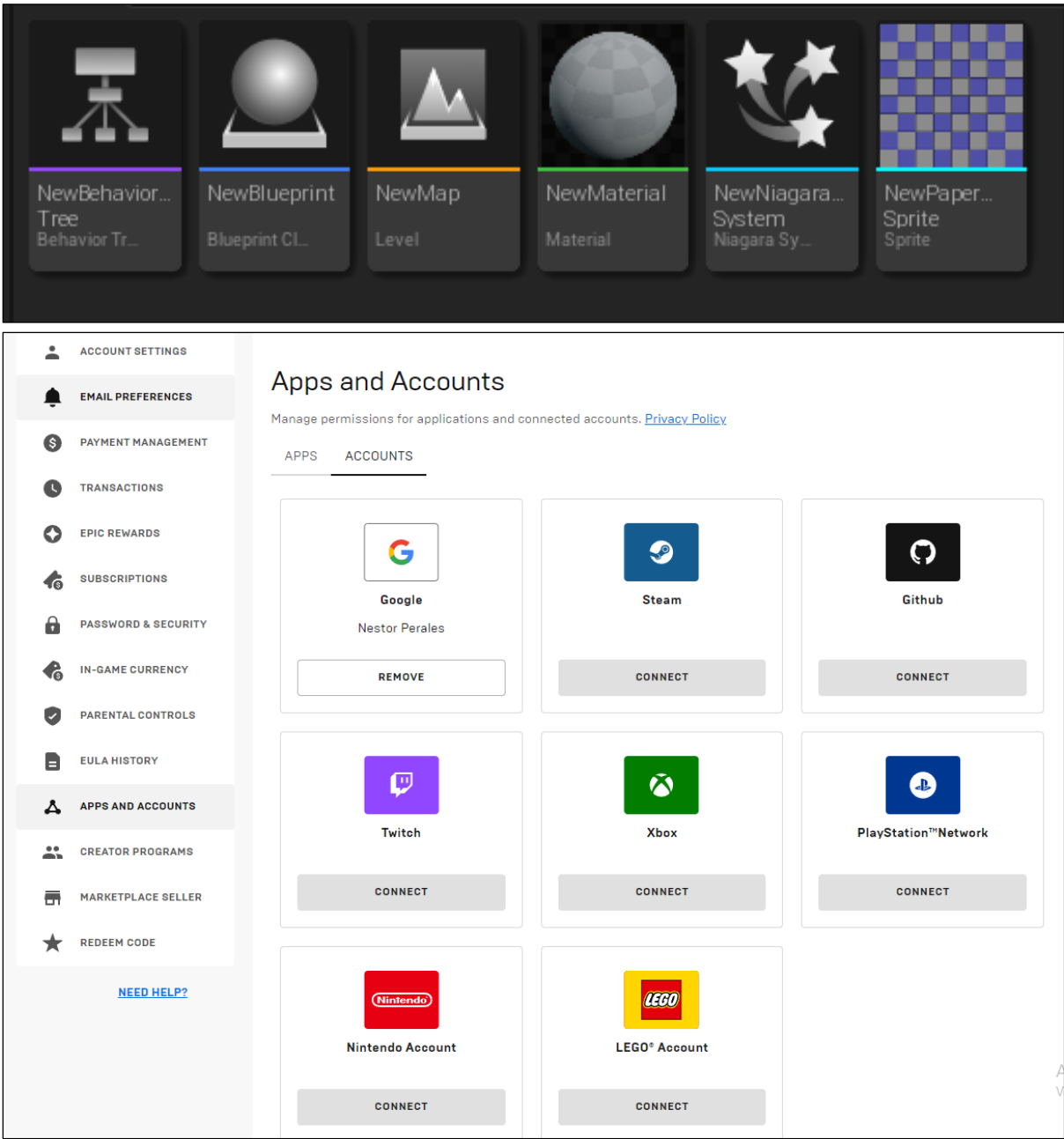








Chapter 4: Project Structure and Naming Conventions



FileEditViewRepositoryActionsToolsHelp

New tab X +

LocalRemote

CloneAddCreate

Create a repository

Browse

MultiplayerRPG

Git

☒ Create Repository On Account:

Account

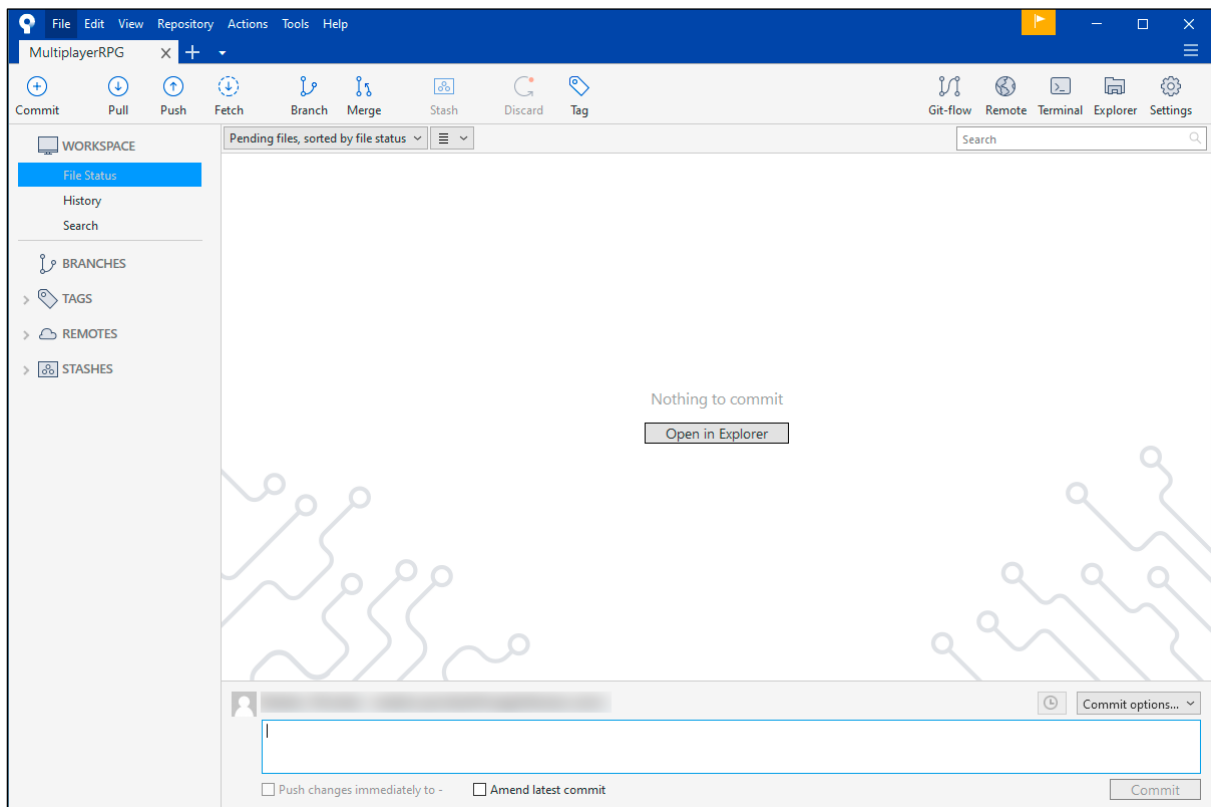
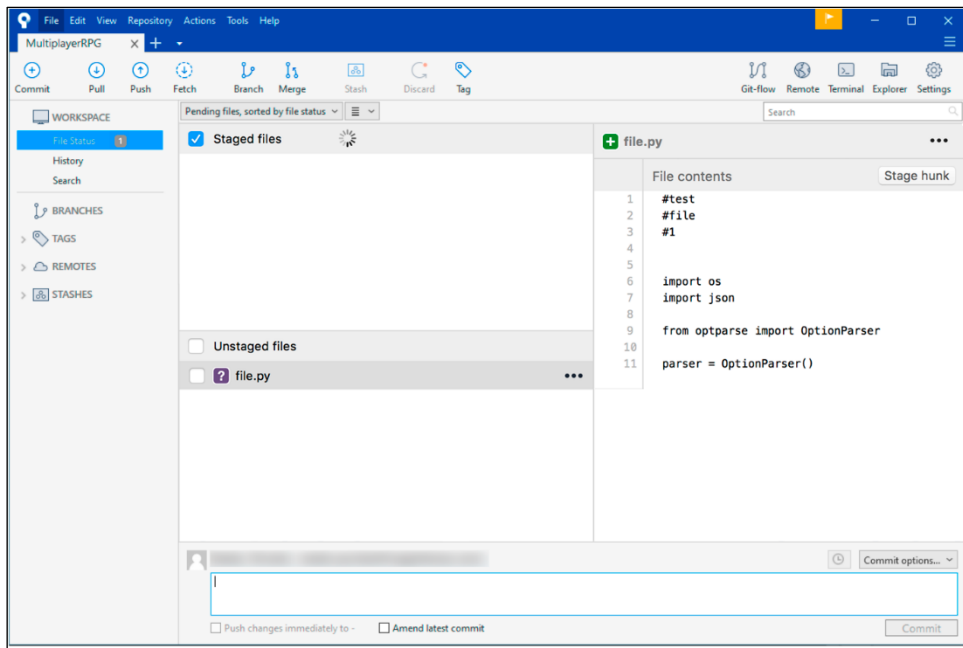
GitHub:

Owner

Description:

☐ Is Private

Create



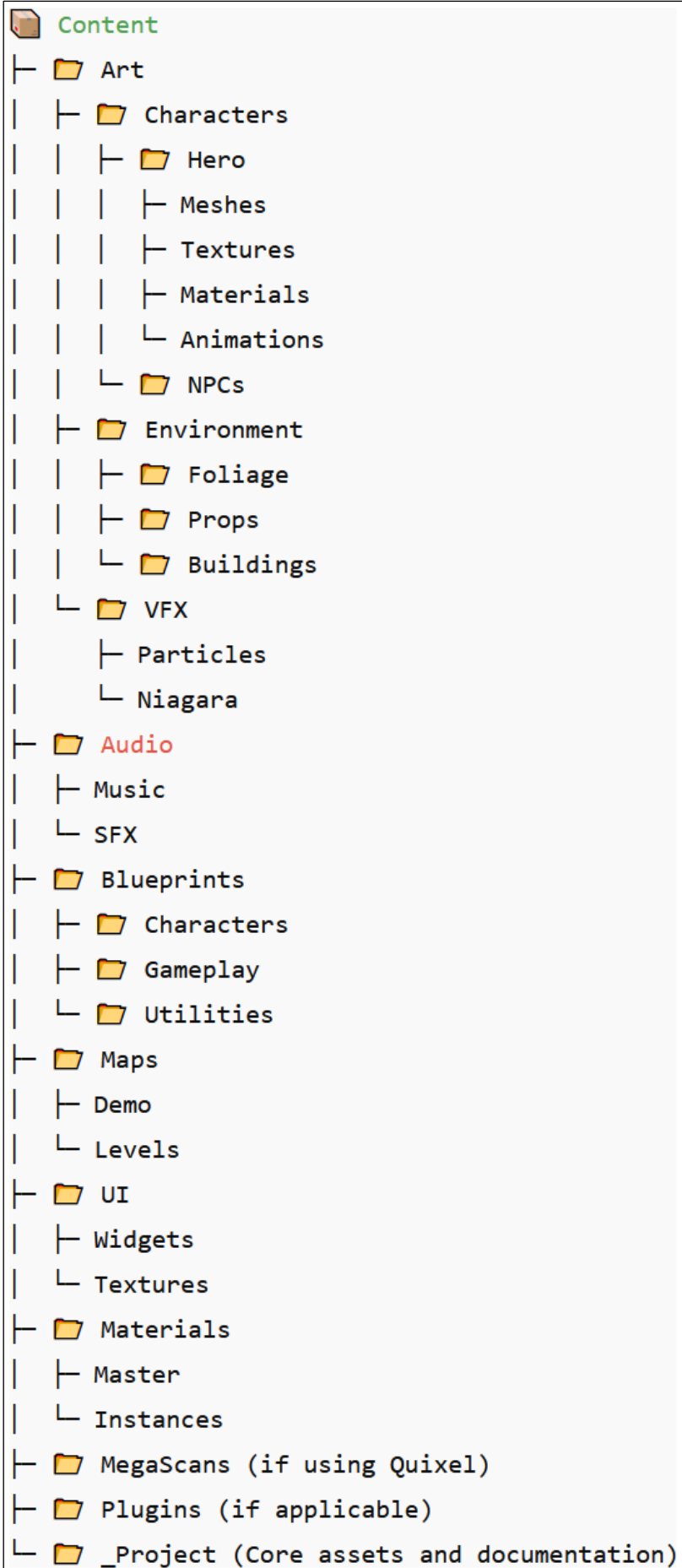
- NewBehaviorTree.uasset
- NewBlueprint.uasset
- NewMap.umap
- NewMaterial.uasset
- NewNiagaraSystem.uasset
- NewPaperSprite.uasset

Asset Type	Prefix	Suffix	Notes
Level / Map			Should be in a folder called Maps.
Level (Persistent)		_P	
Level (Audio)		_Audio	
Level (Lighting)		_Lighting	
Level (Geometry)		_Geo	
Level (Gameplay)		_Gameplay	
Blueprint	BP_		
Material	M_		
Static Mesh	S_		Many use SM_. We use S_.
Skeletal Mesh	SK_		
Texture	T_	_?	See Textures
Particle System	PS_		
Widget Blueprint	WBP_		

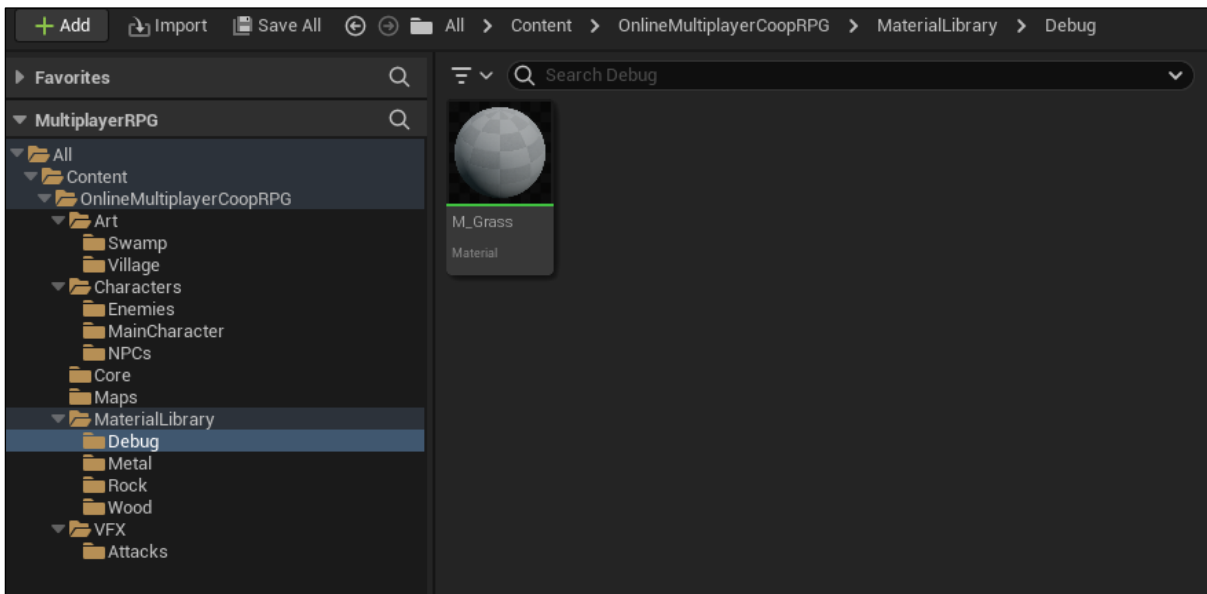
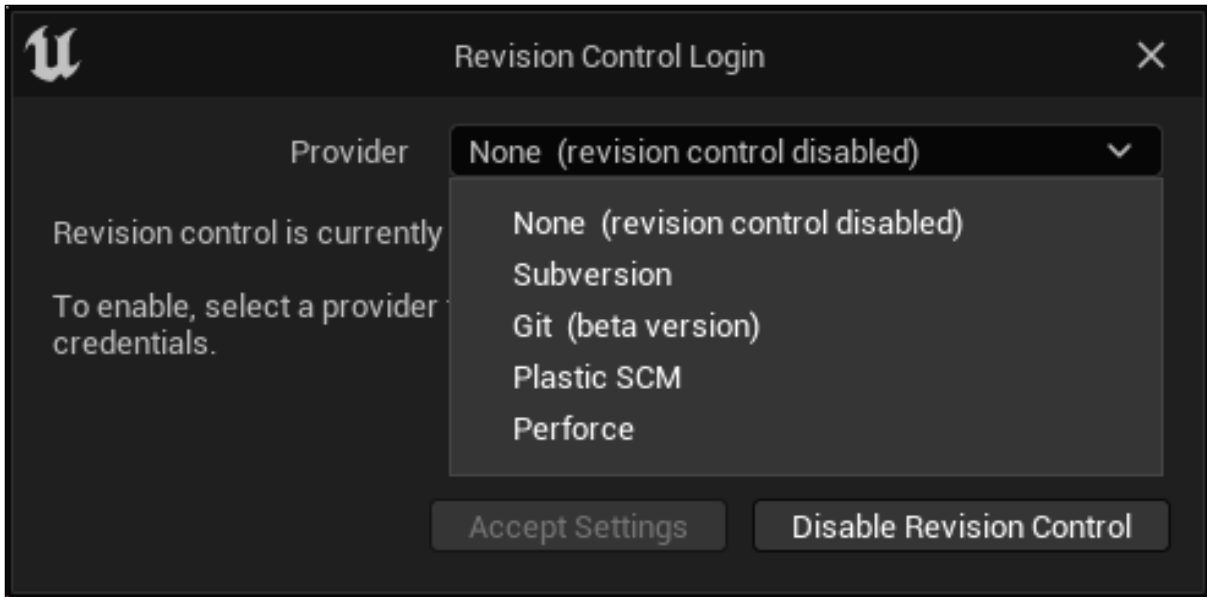
Asset Type	Prefix	Suffix	Notes
Texture	T_		
Texture (Diffuse/Albedo/Base Color)	T_	_D	
Texture (Normal)	T_	_N	
Texture (Roughness)	T_	_R	
Texture (Alpha/Opacity)	T_	_A	
Texture (Ambient Occlusion)	T_	_O	
Texture (Bump)	T_	_B	
Texture (Emissive)	T_	_E	
Texture (Mask)	T_	_M	
Texture (Specular)	T_	_S	
Texture (Metallic)	T_	_M	
Texture (Packed)	T_	_*	See notes below about packing .
Texture Cube	TC_		
Media Texture	MT_		
Render Target	RT_		
Cube Render Target	RTC_		
Texture Light Profile	TLP		

Asset Type	Asset Name
Skeletal Mesh	SK_Bob
Material	M_Bob
Texture (Diffuse/Albedo)	T_Bob_D
Texture (Normal)	T_Bob_N
Texture (Evil Diffuse)	T_Bob_Evil_D

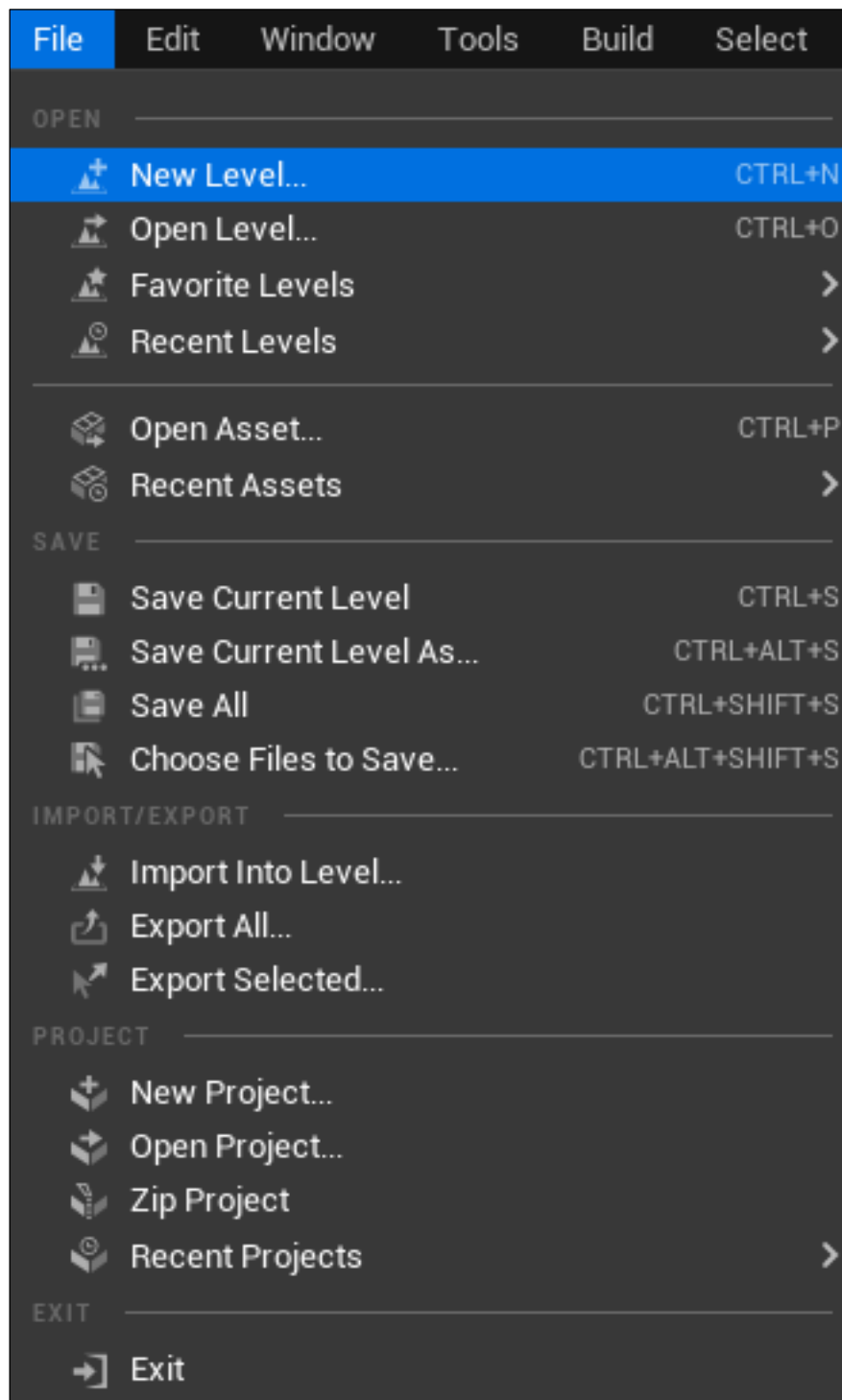
Asset Type	Asset Name
Static Mesh (01)	S_Rock_01
Static Mesh (02)	S_Rock_02
Static Mesh (03)	S_Rock_03
Material	M_Rock
Material Instance (Snow)	MI_Rock_Snow



```
|-- Content
  |-- GenericShooter
    |-- Art
      |-- Industrial
      |   |-- Ambient
      |   |-- Machinery
      |   |-- Pipes
      |-- Nature
      |   |-- Ambient
      |   |-- Foliage
      |   |-- Rocks
      |   |-- Trees
      |-- Office
    |-- Characters
      |-- Bob
      |-- Common
      |   |-- Animations
      |   |-- Audio
      |-- Jack
      |-- Steve
      |-- Zoe
    |-- Core
      |-- Characters
      |-- Engine
      |-- GameModes
      |-- Interactables
      |-- Pickups
      |-- Weapons
    |-- Effects
      |-- Electrical
      |-- Fire
      |-- Weather
    |-- Maps
      |-- Campaign1
      |-- Campaign2
    |-- MaterialLibrary
      |-- Debug
      |-- Metal
      |-- Paint
      |-- Utility
      |-- Weathering
    |-- Placeables
      |-- Pickups
    |-- Weapons
      |-- Common
      |-- Pistols
      |   |-- DesertEagle
      |   |-- RocketPistol
      |-- Rifles
```



Chapter 5: Managing Levels and Layers



LEVEL EDITOR

-  Cinematics >
-  Content Browser >
-  Details >
-  ImgMedia >
-  Outliner >
-  Viewports >
-  World Partition >
-  Console Variables
-  Env. Light Mixer
-  Hierarchical LOD Outliner

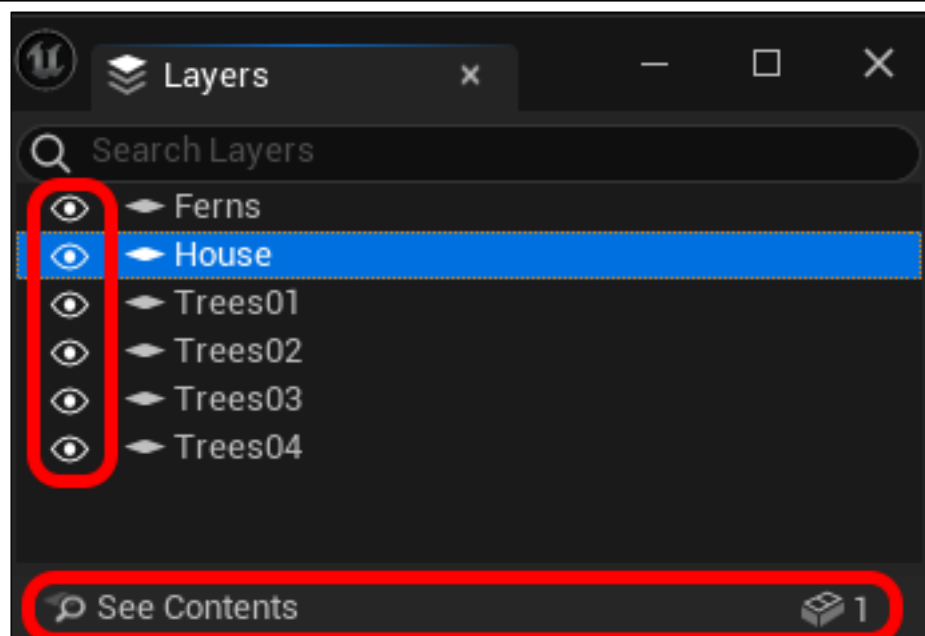
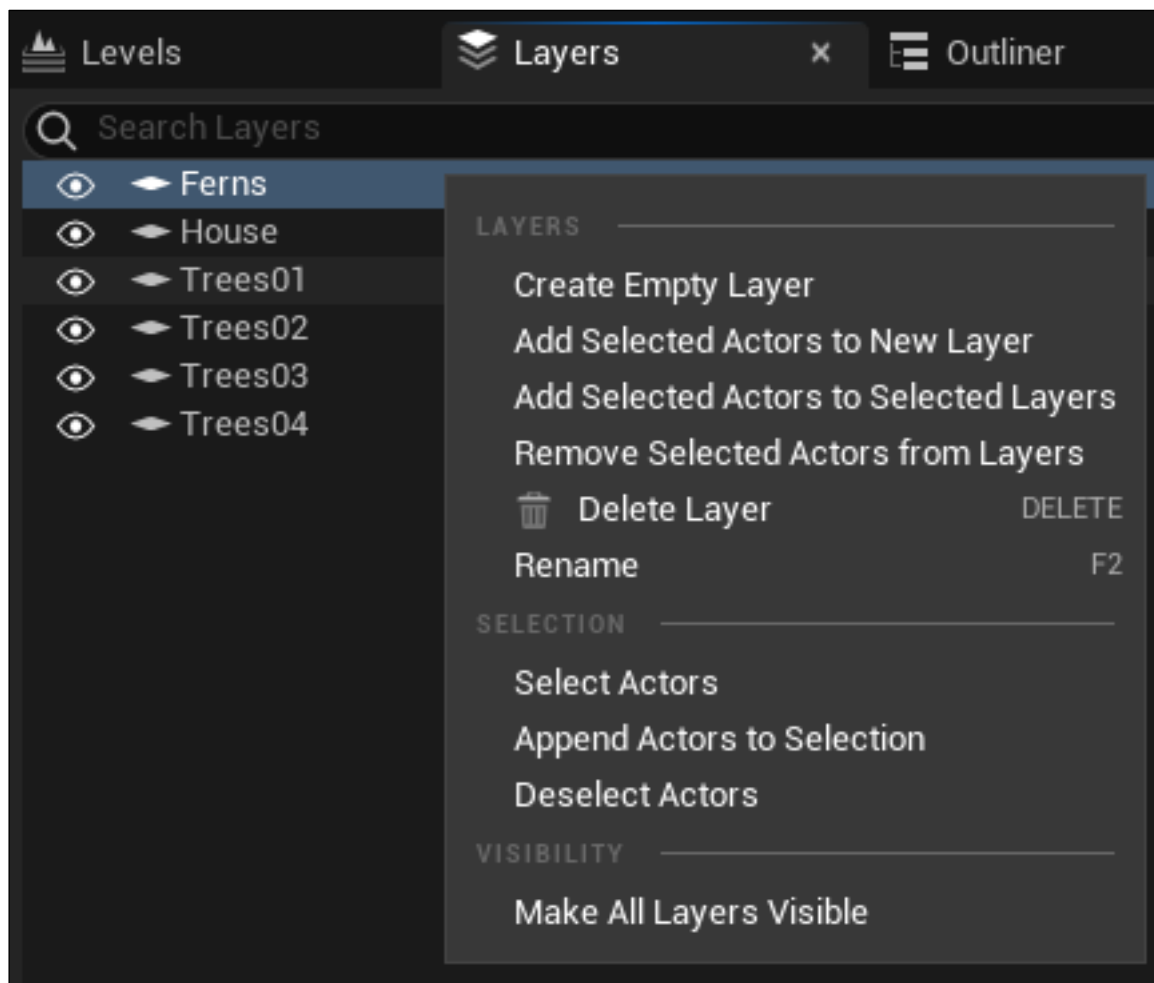
✓  Layers

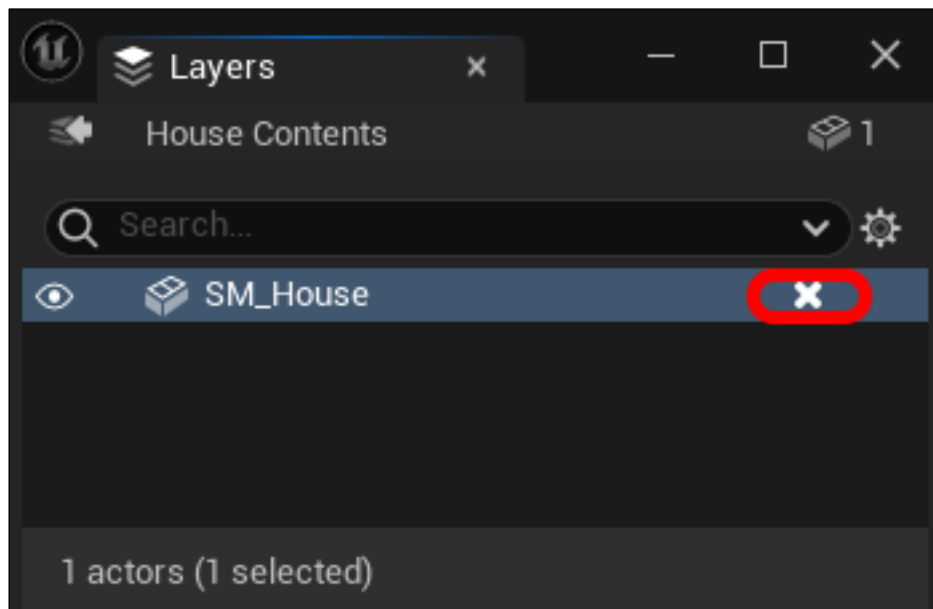
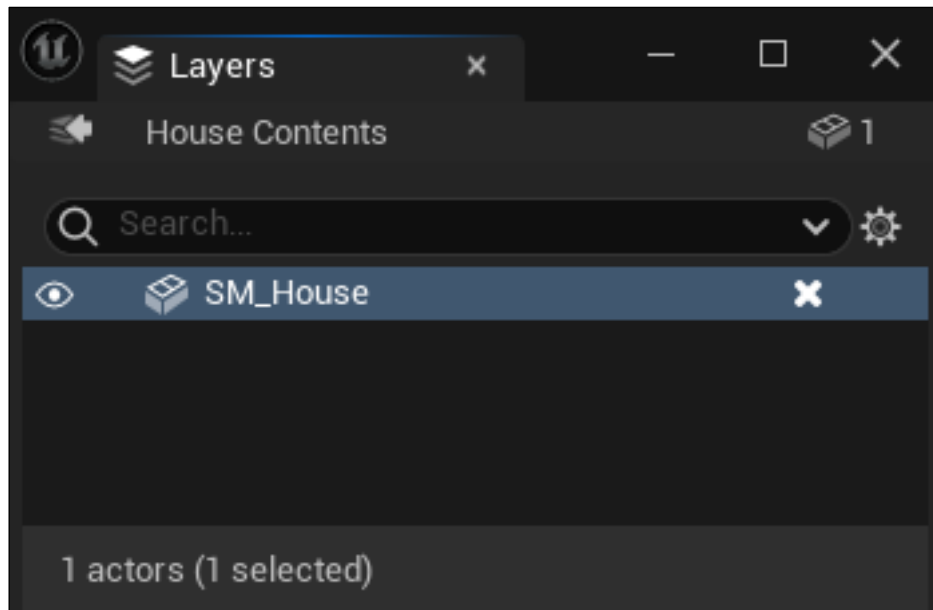
✓  Levels

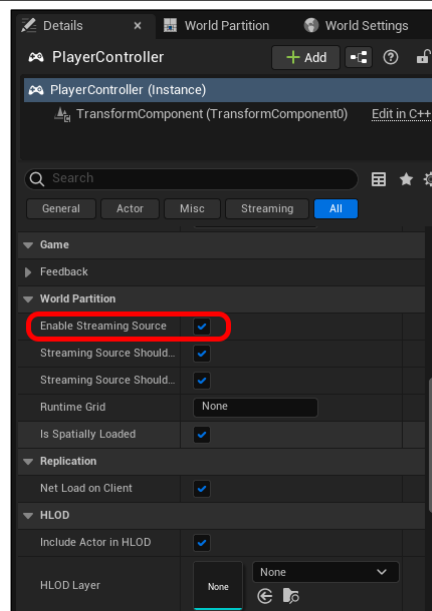
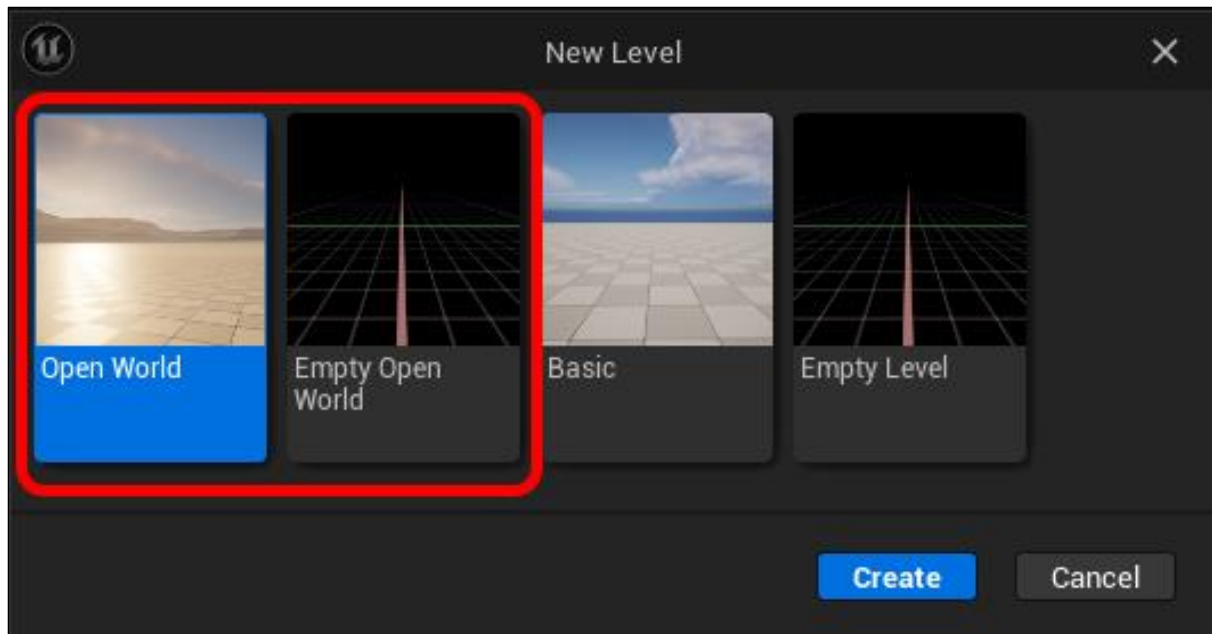
 Light Mixer

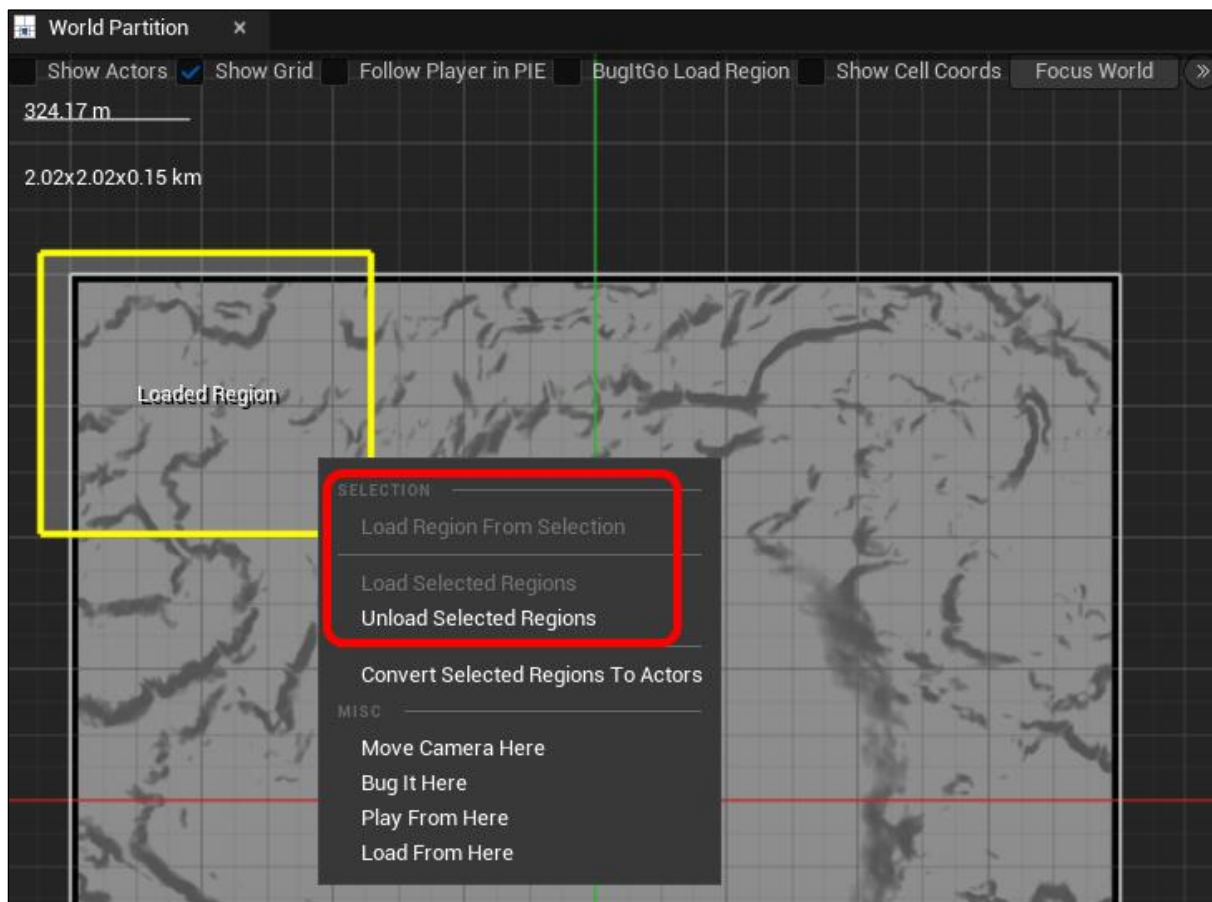
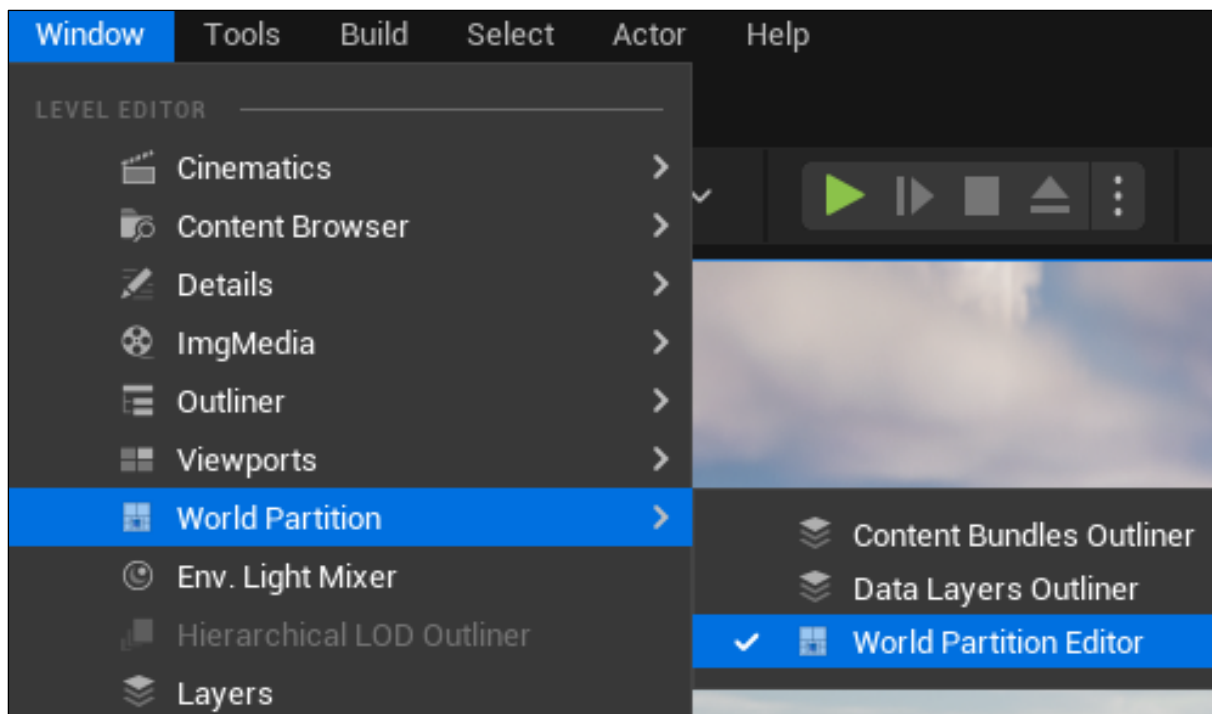
✓  Place Actors

 Variant Manager









Build Select Actor Help

LEVEL

Build All Levels

LIGHTING

Build Lighting Only CTRL+SHIFT+SEMICOLON

Lighting Quality >

Lighting Info >

☐ Use Error Coloring

☐ Show Lighting Stats

REFLECTIONS

Build Reflection Captures

VISIBILITY

Precompute Static Visibility

GEOMETRY

Build Geometry

Build Geometry (Current Level)

NAVIGATION

Build Paths

WORLD PARTITION

Build HLODs

Build World Partition Editor Minimap

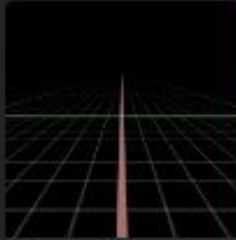
Build Landscape Spline Meshes



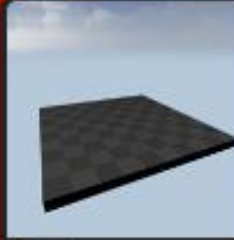
New Level



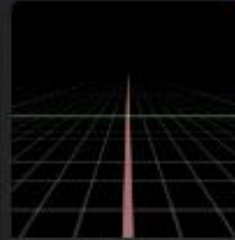
Open World



Empty Open
World



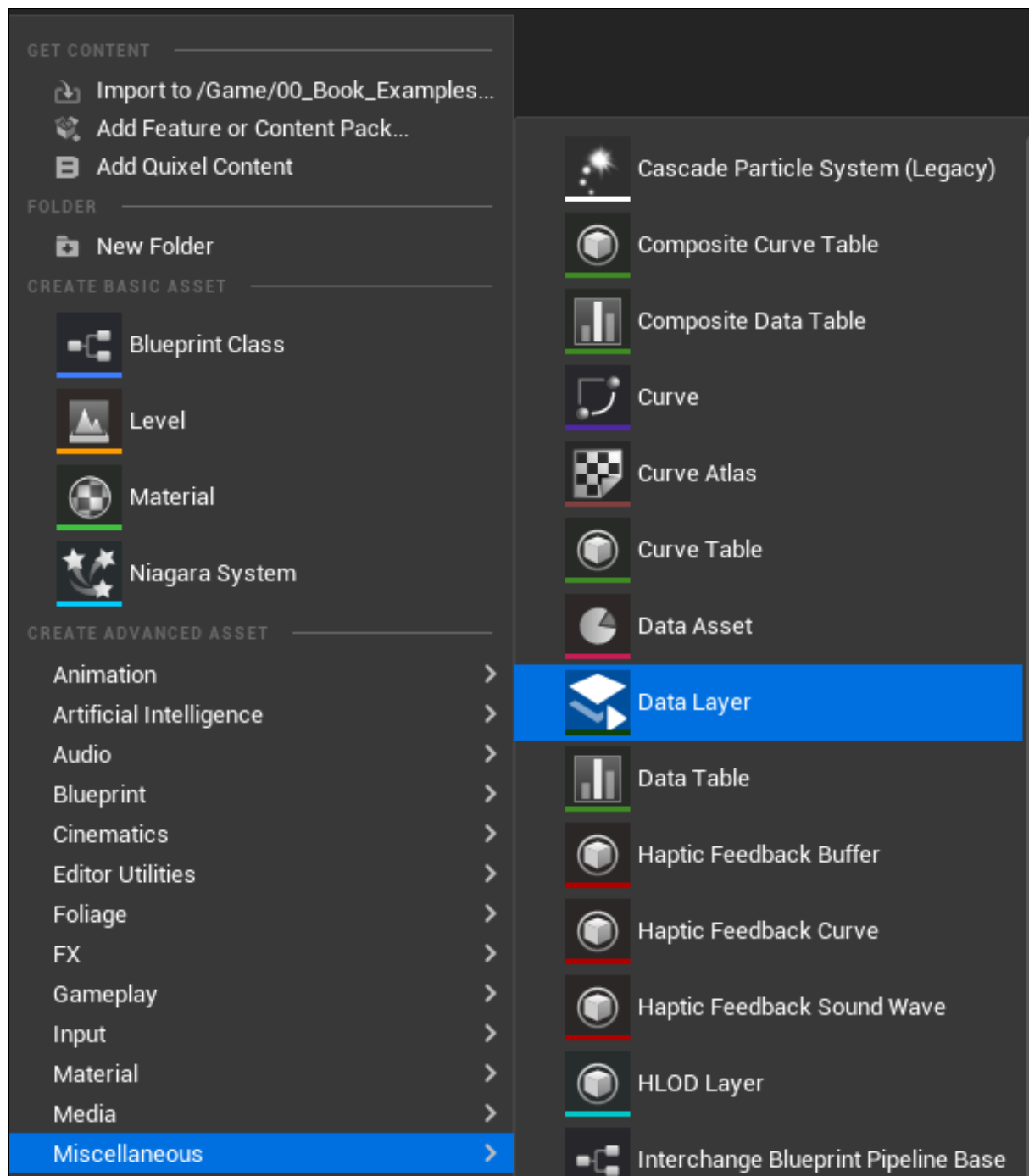
Basic

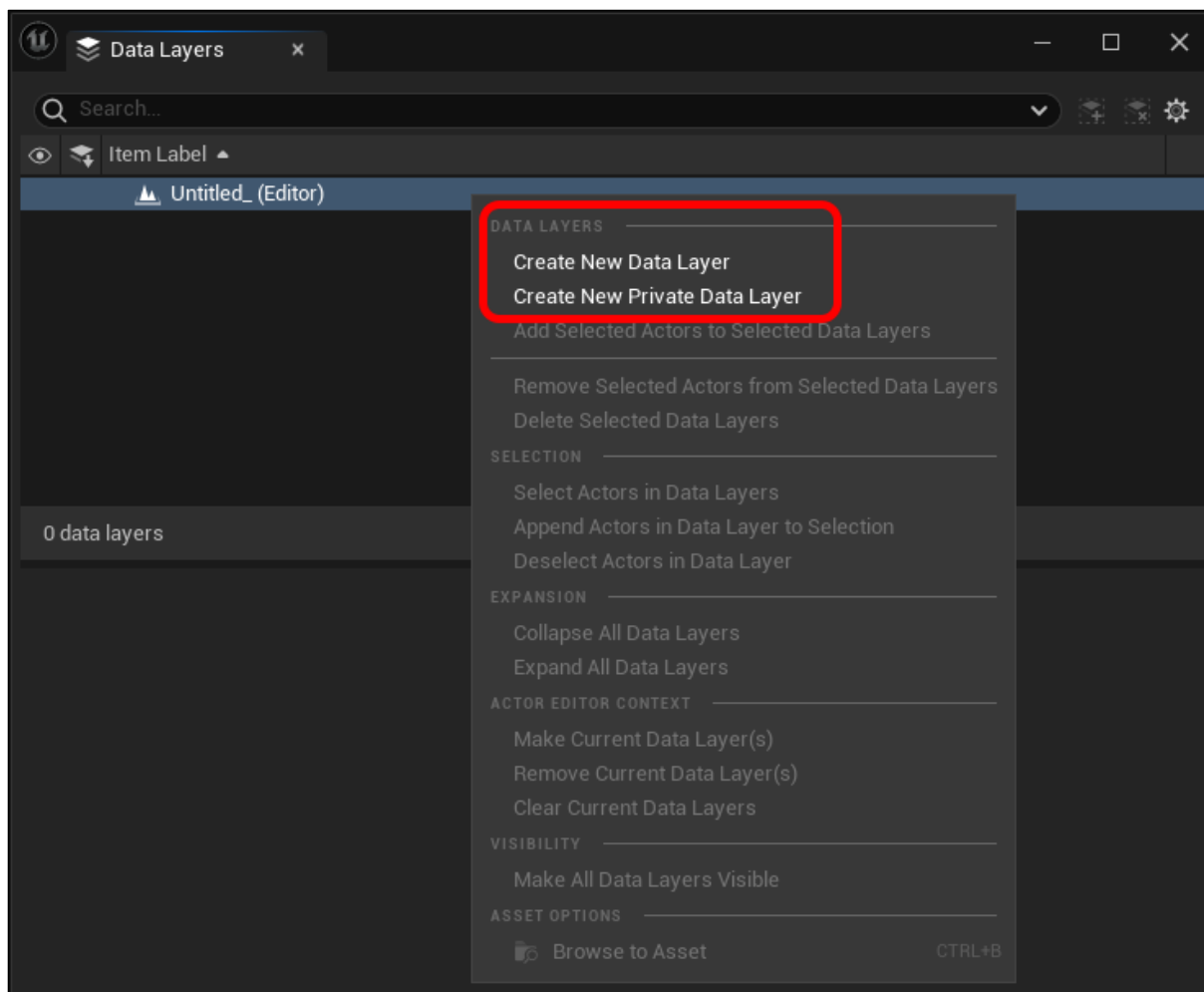


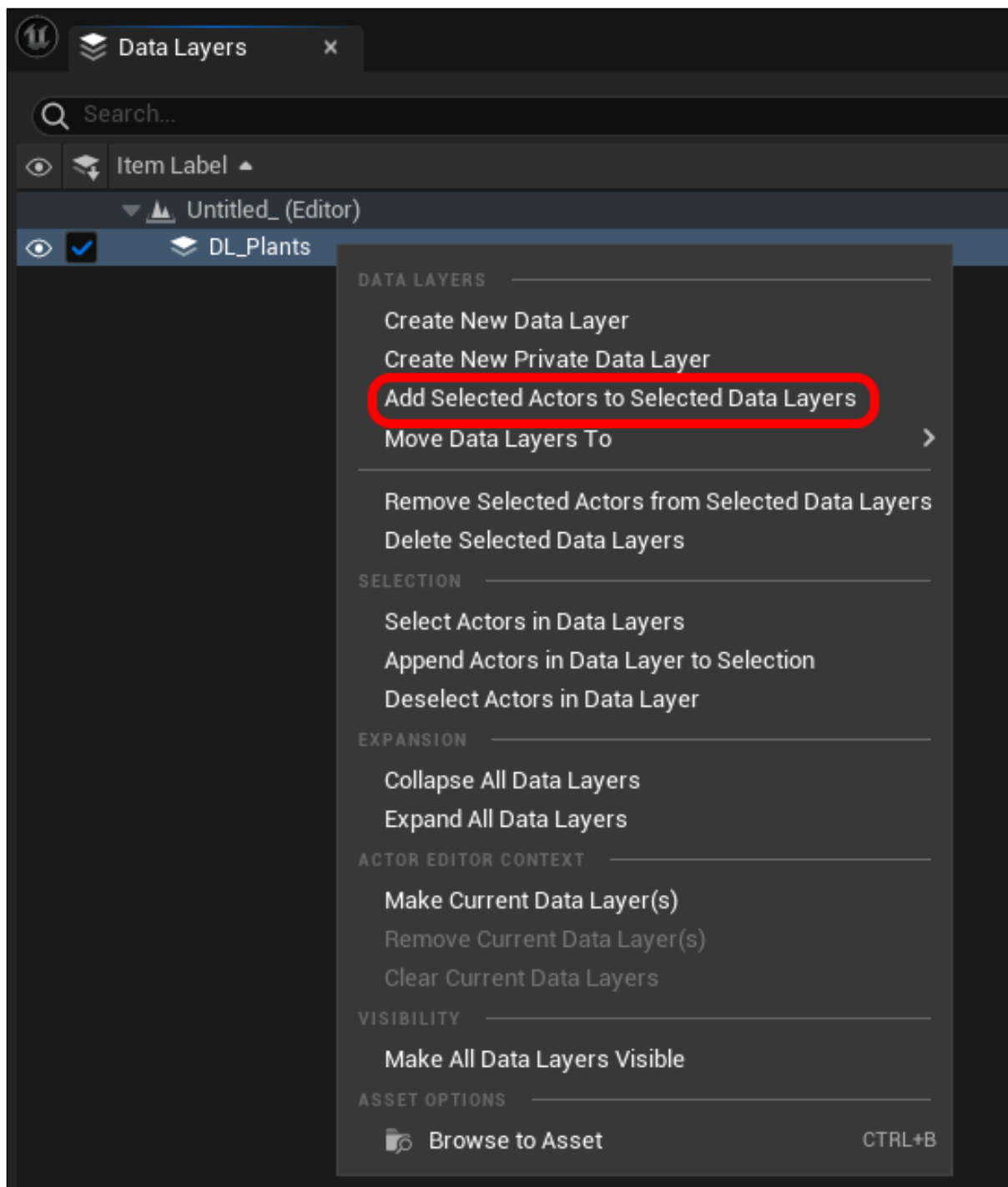
Empty Level

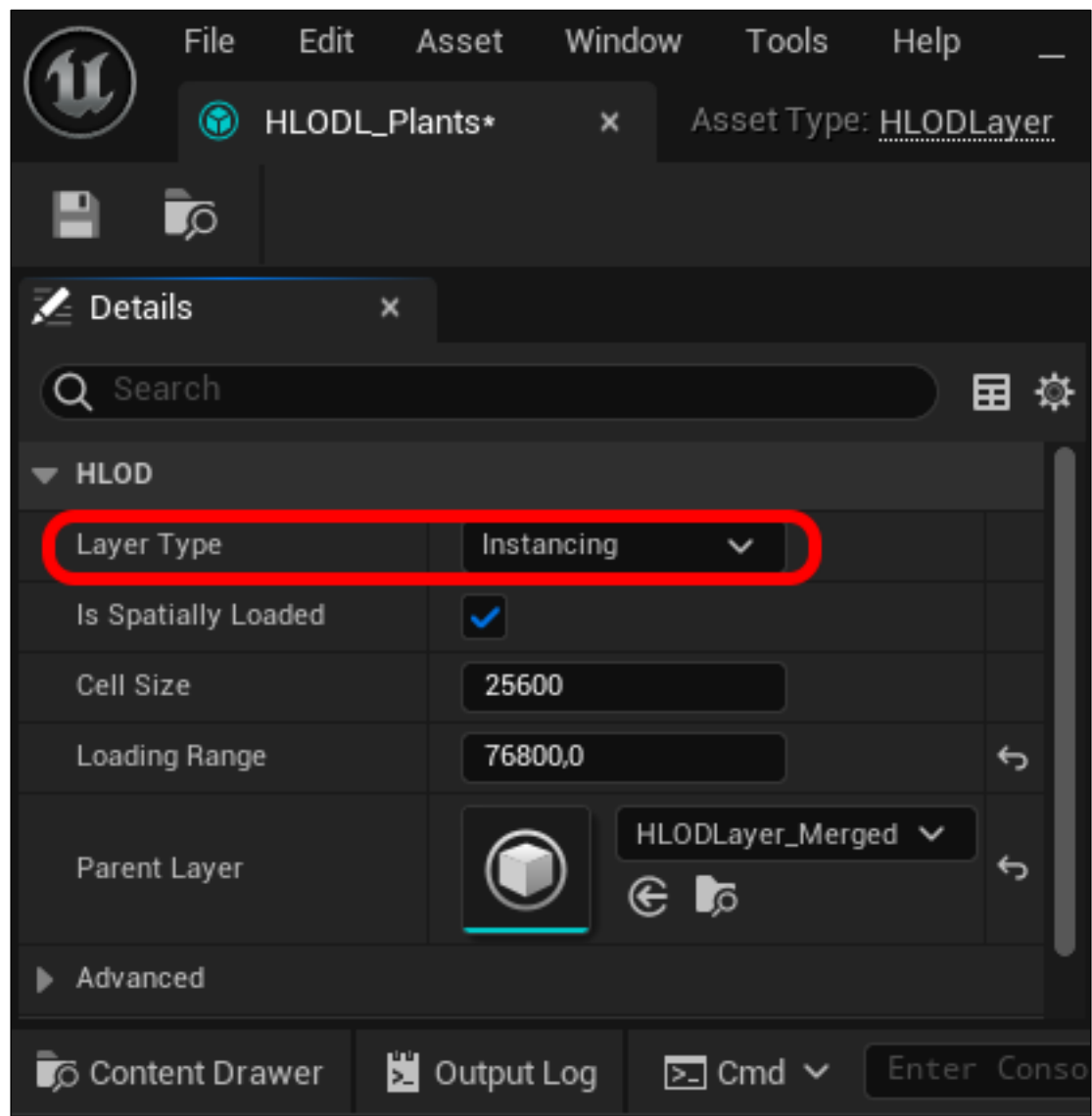
Create

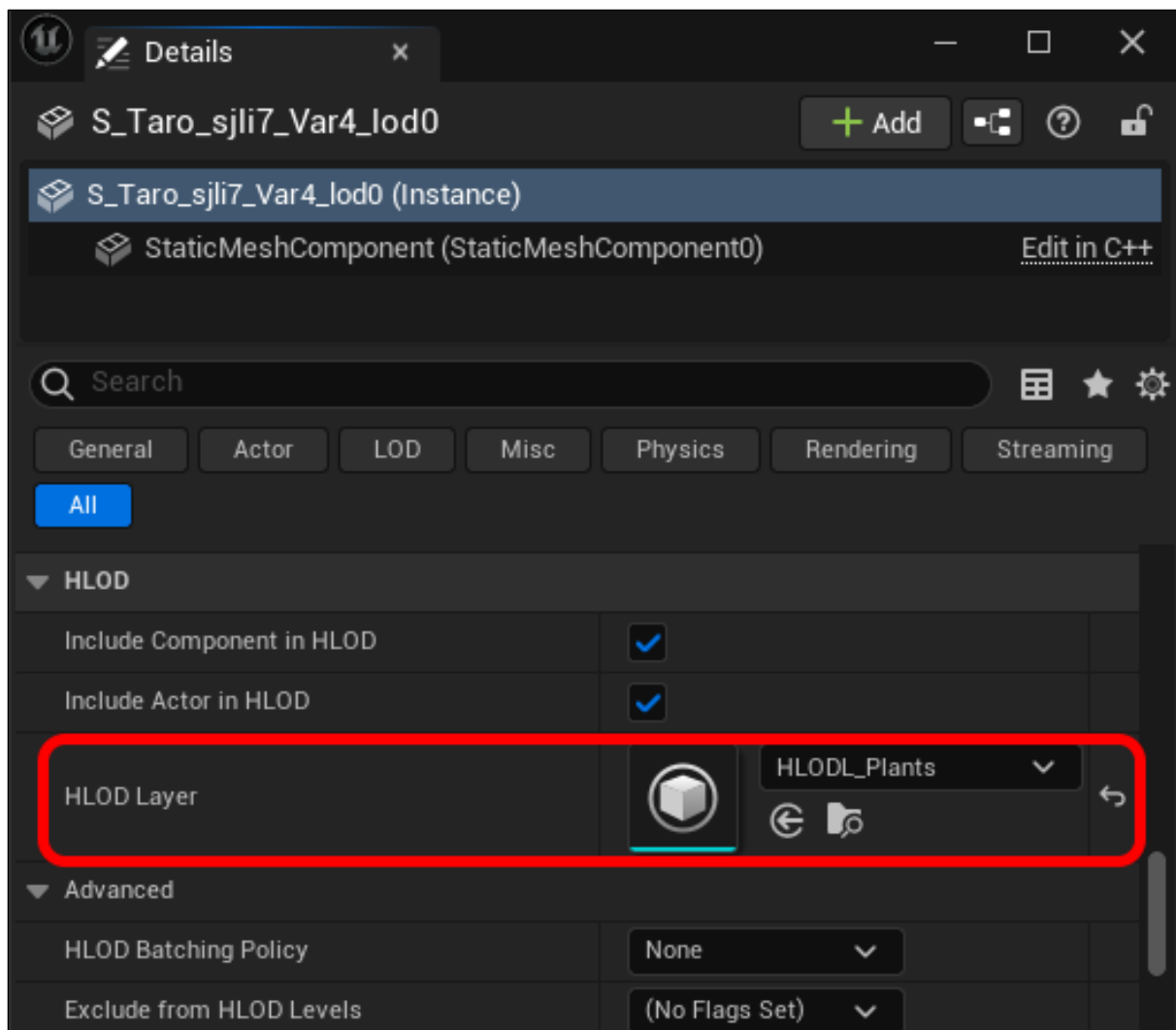
Cancel

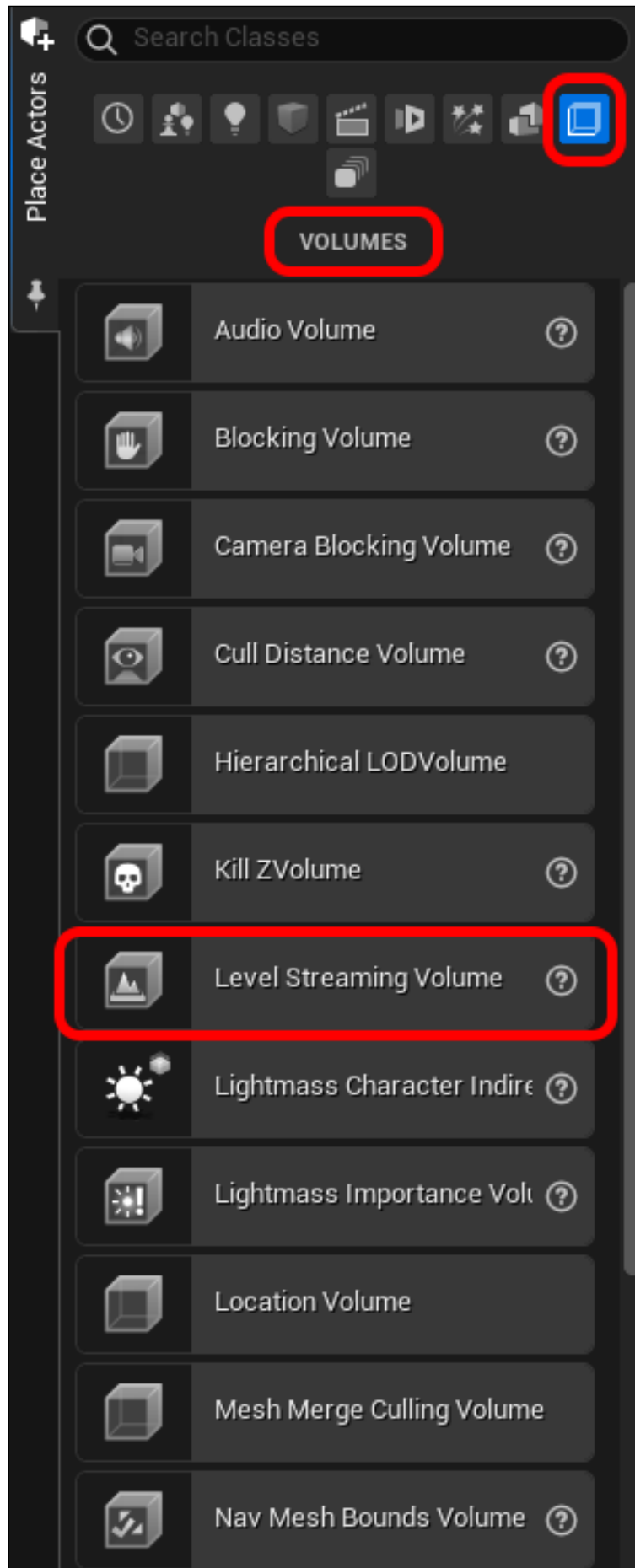


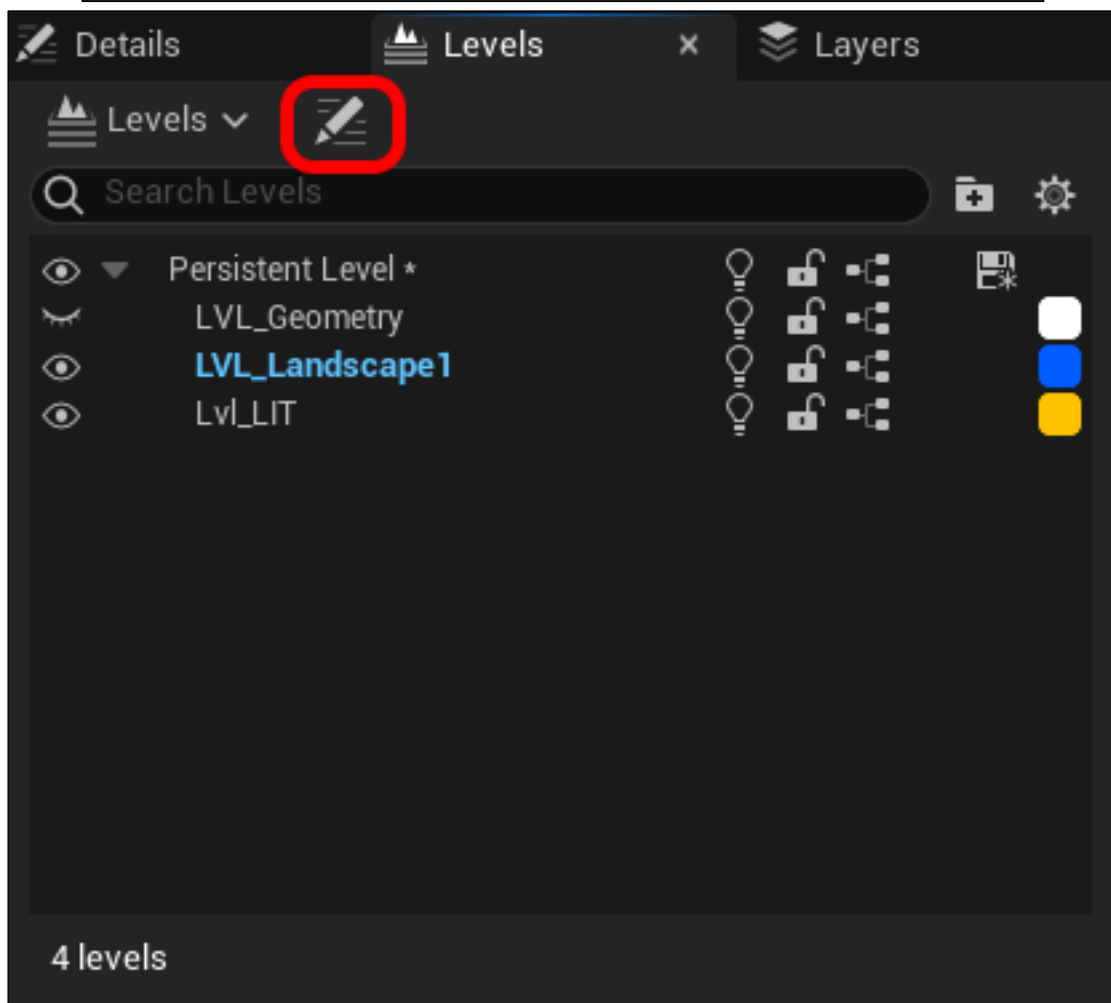
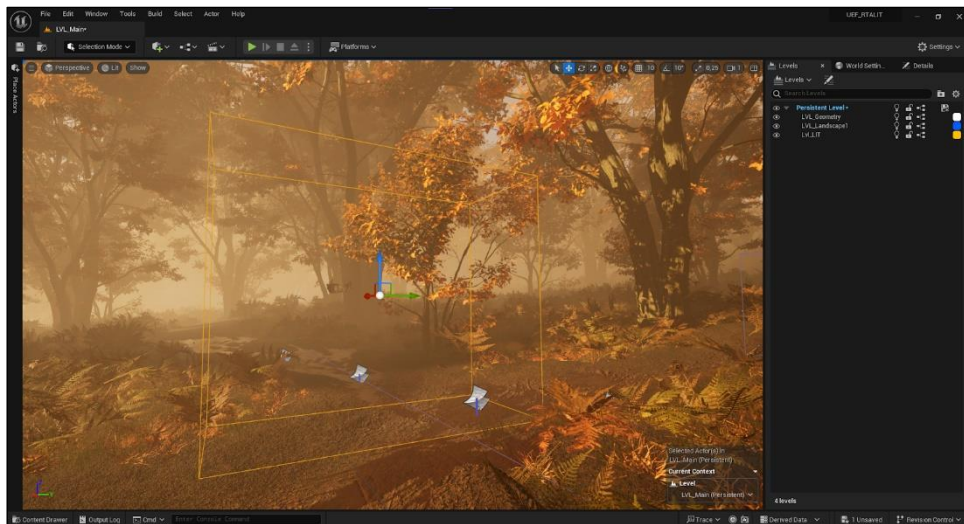


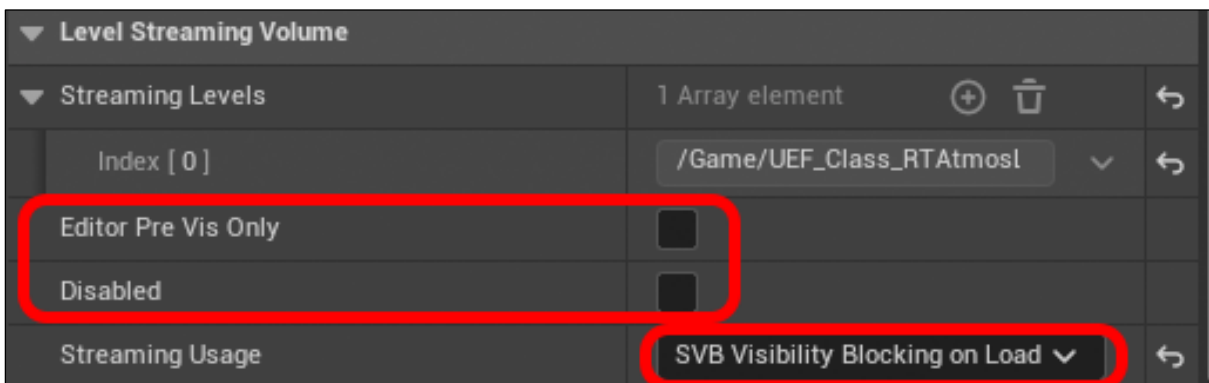
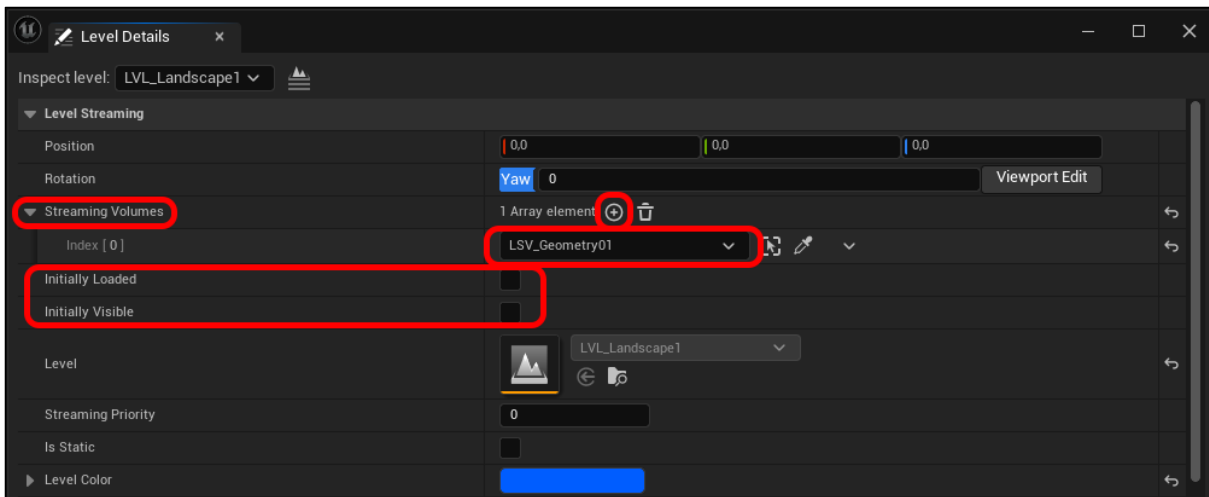












GET CONTENT

-  Import to /Game/00_Book_Examples/00_Levels...
-  Add Feature or Content Pack...
-  Add Quixel Content

FOLDER

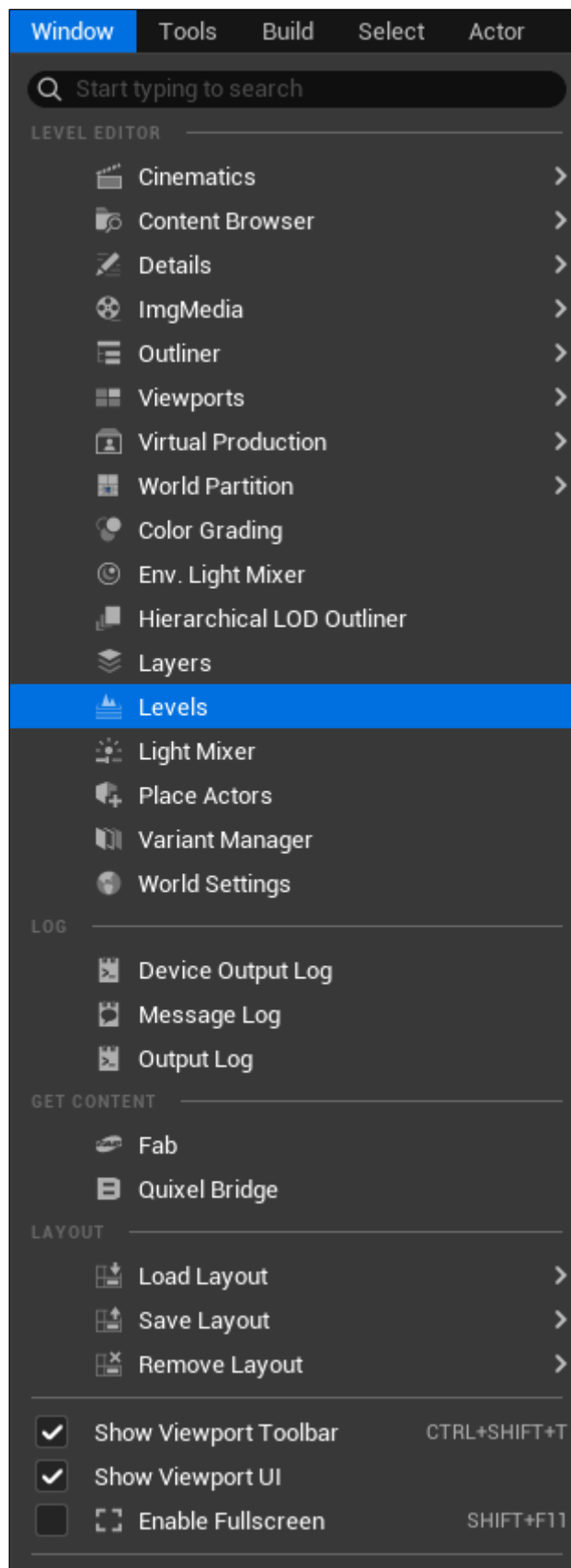
-  New Folder

CREATE BASIC ASSET

-  Blueprint Class
-  Level
-  Material
-  Niagara System

CREATE ADVANCED ASSET

- Animation >
- Artificial Intelligence >
- Audio >
- Blueprint >
- Cinematics >
- Editor Utilities >
- Foliage >
- FX >
- Gameplay >
- Input >
- Material >
- Media >
- Miscellaneous >
- Paper2D >
- PCG >
- Physics >
- Texture >
- Tool Presets >
- User Interface >
- Water >



Details

Levels

Layers

Levels

Search Levels

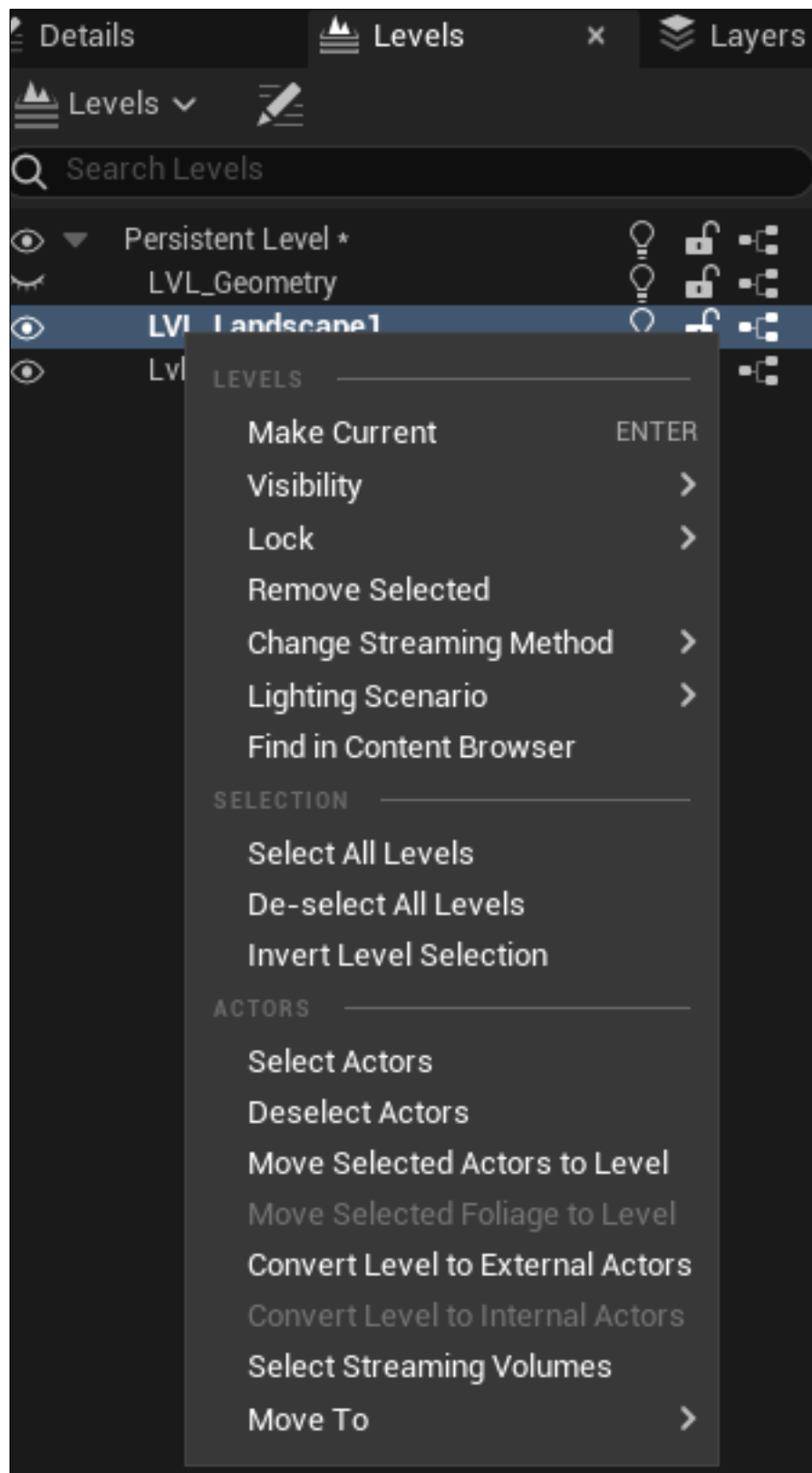
Persistent Level

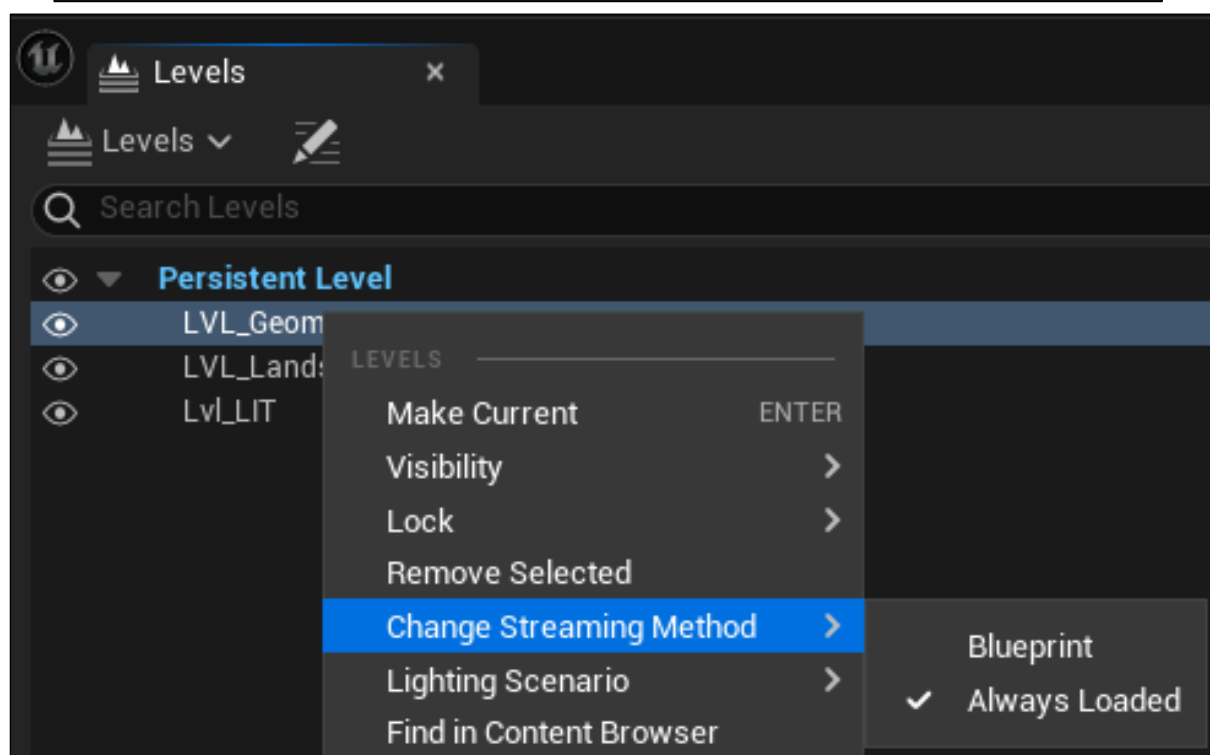
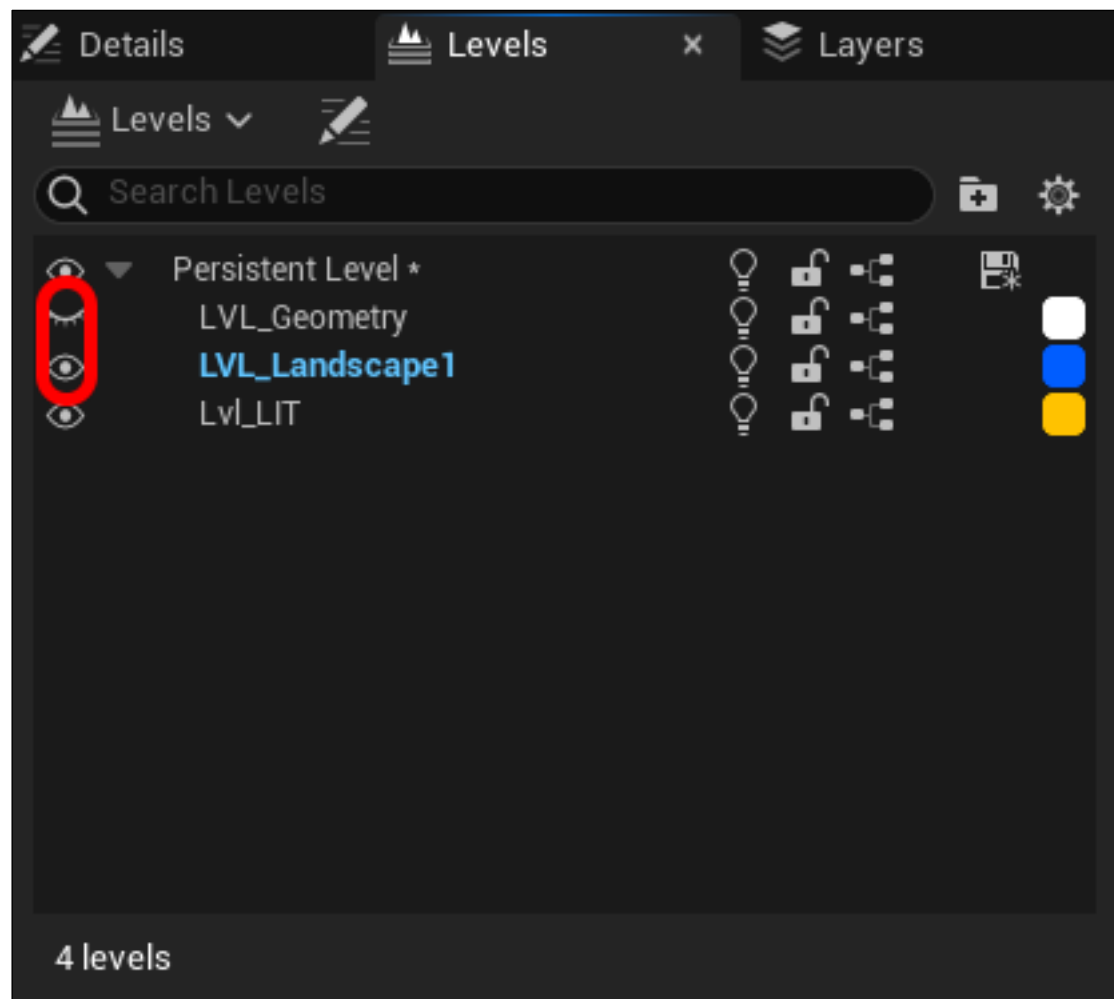
LVL_Geometry

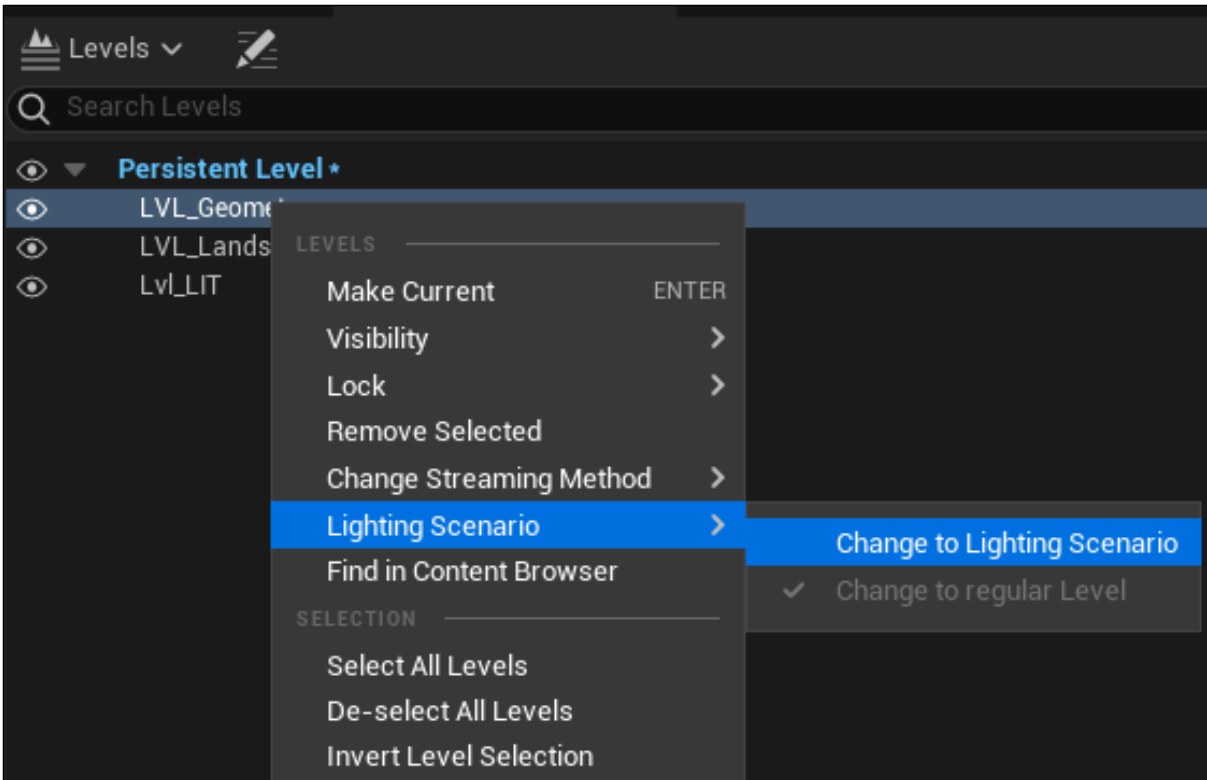
LVL_Landscape1

Lvl_LIT

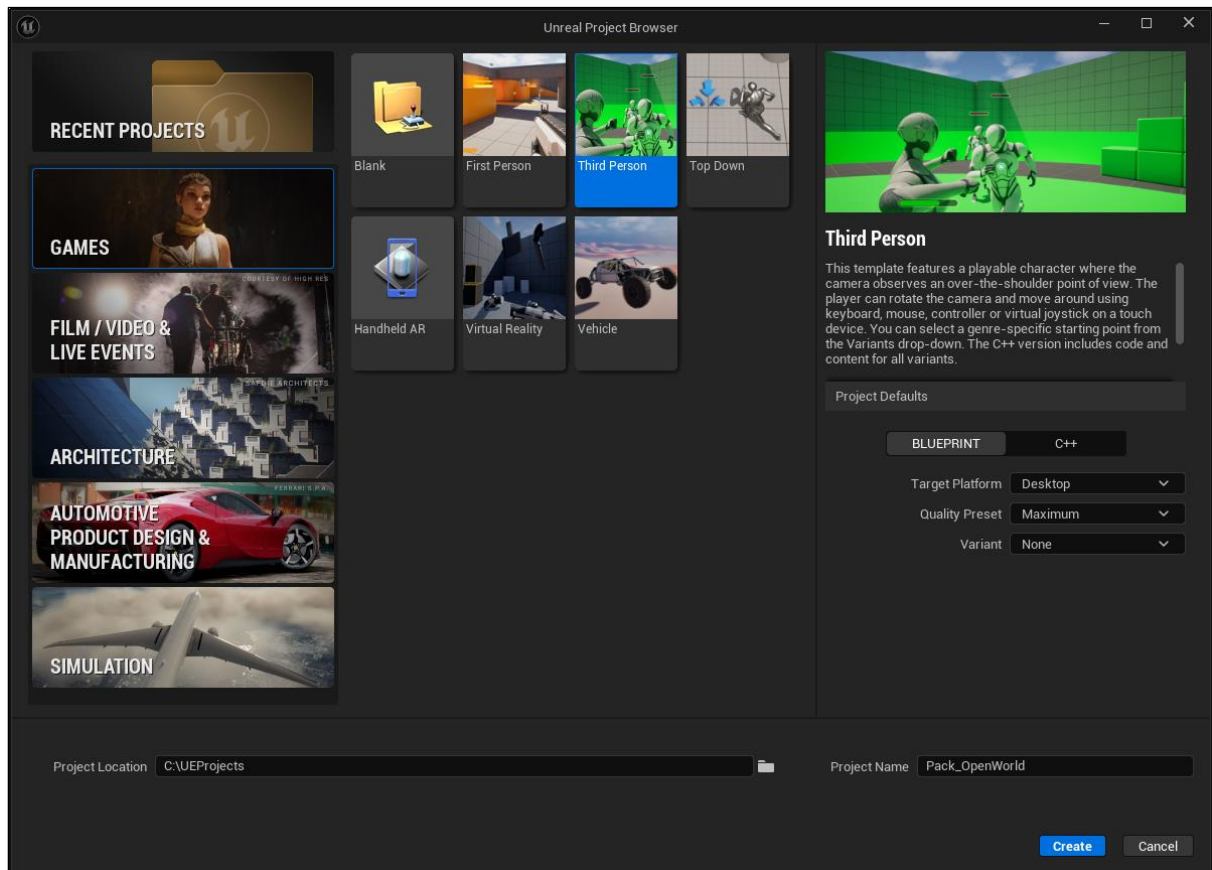
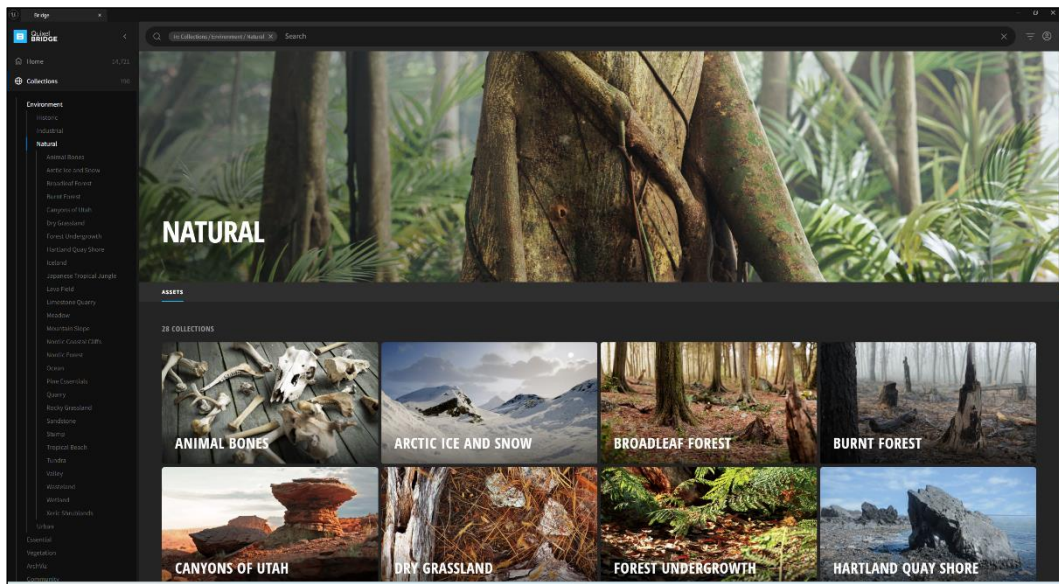
4 levels

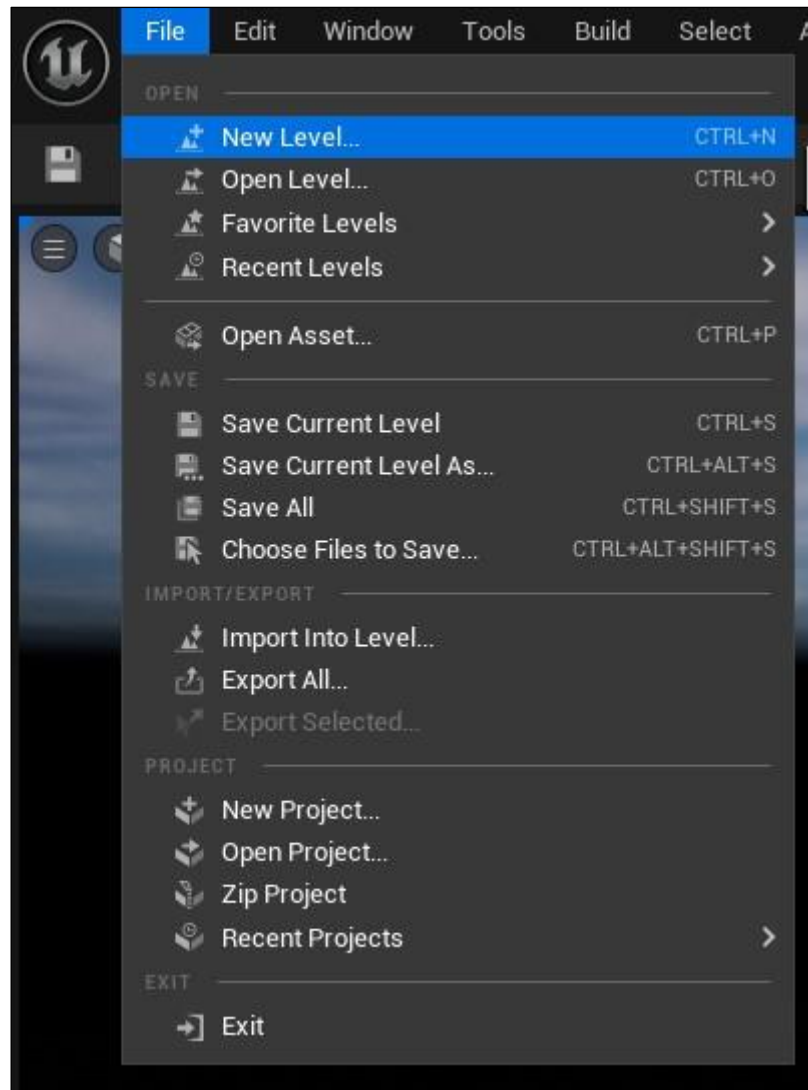


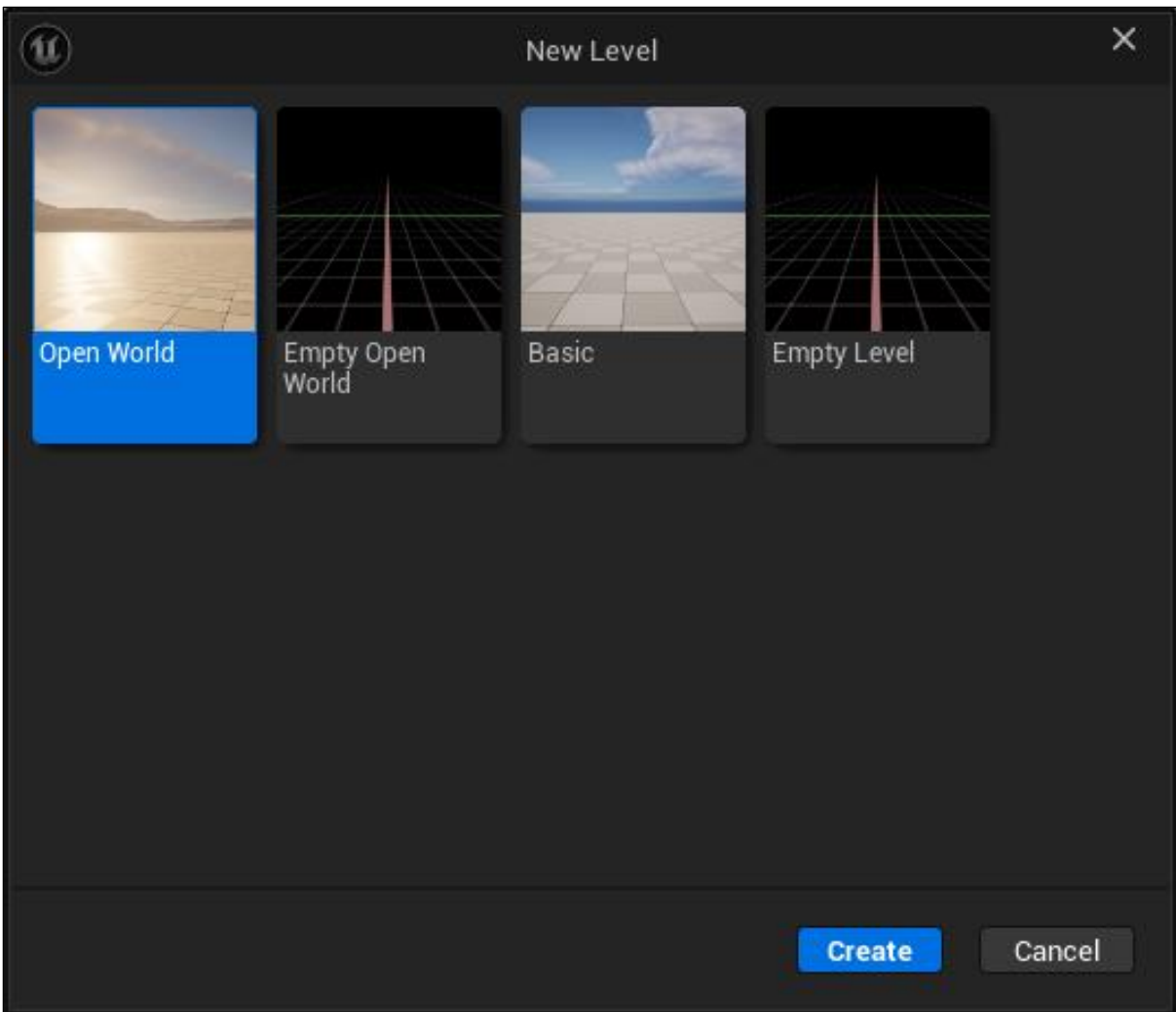


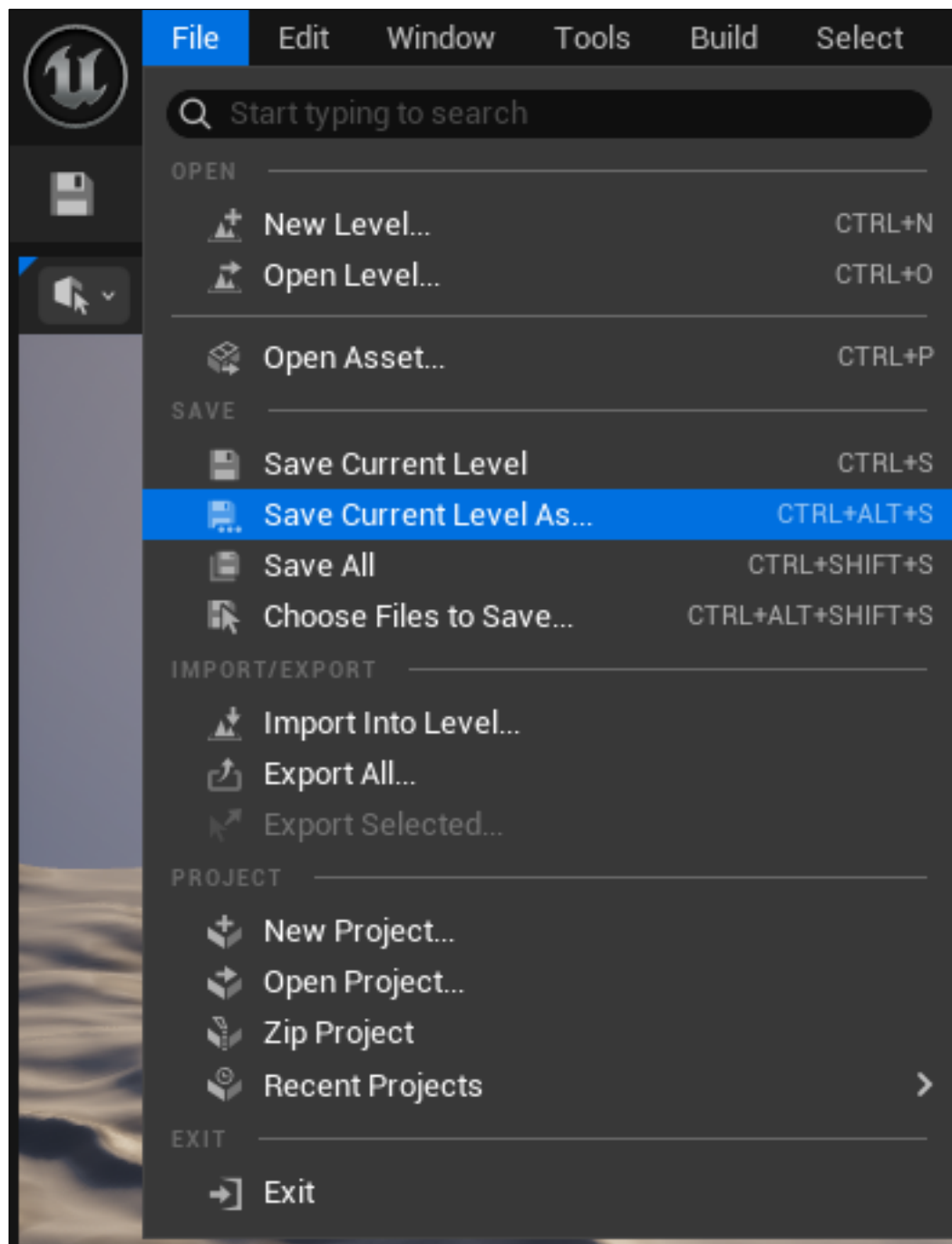


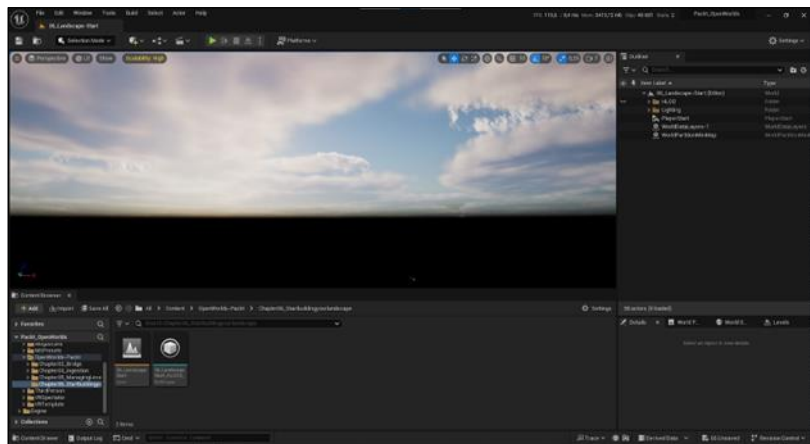
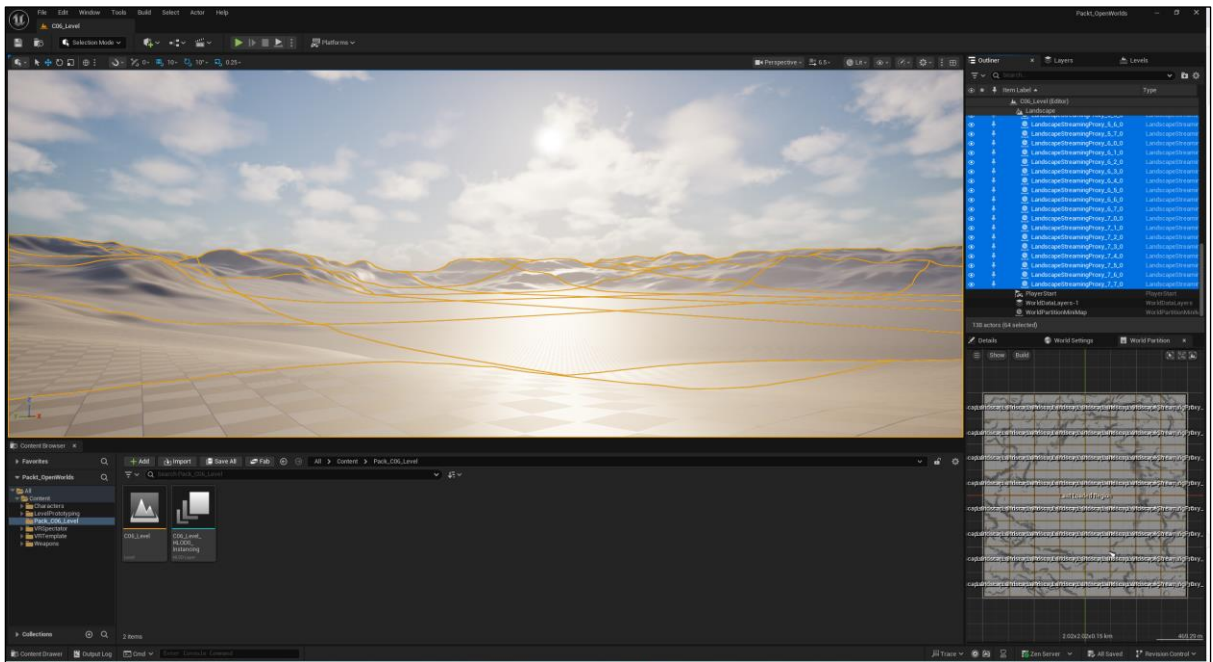
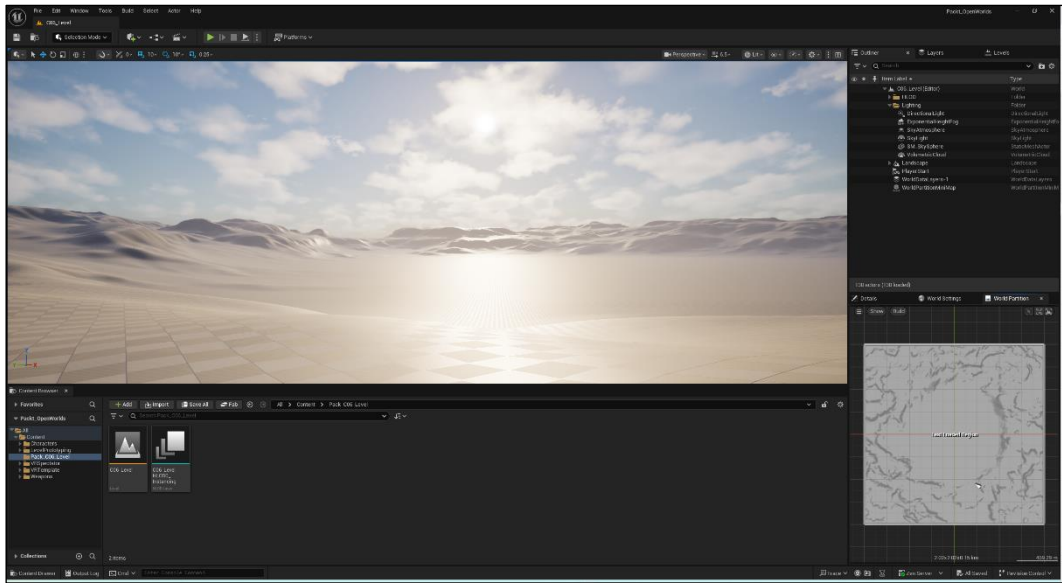
Chapter 6: Building Your Landscape

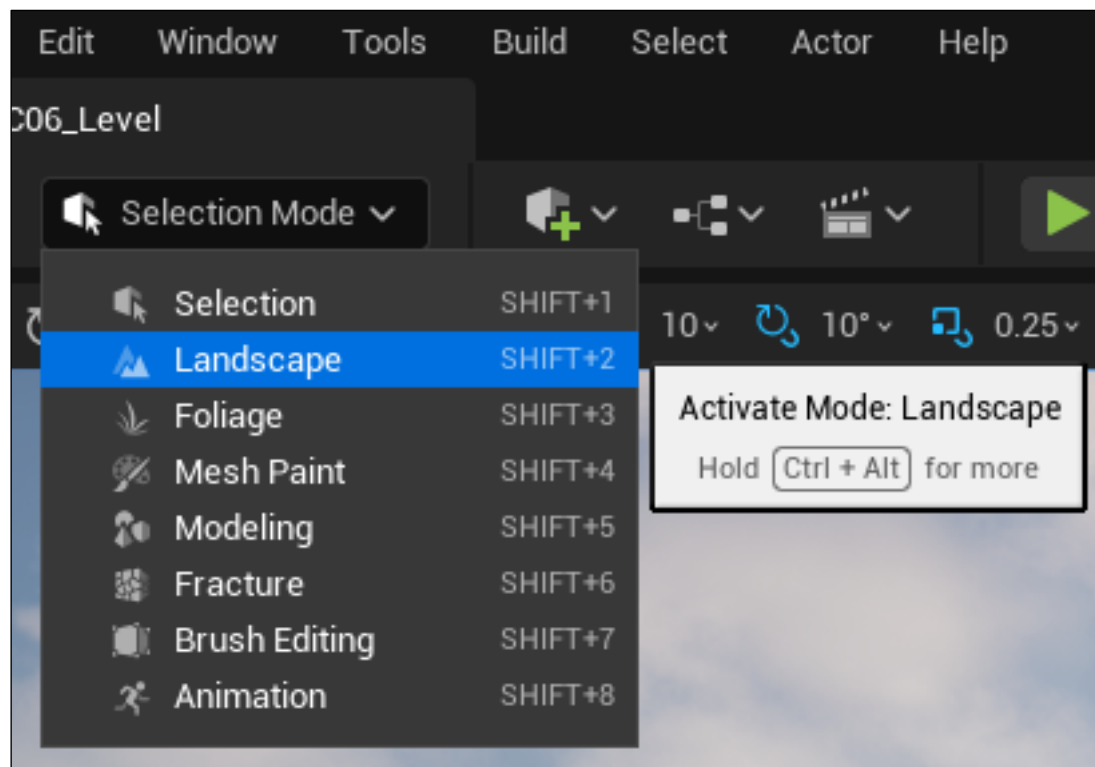












Landscape

ManageSculptPaint

New

Import

Select

Add

Delete

Move

Resize

Splines

Blueprint

New Landscape

Create NewImport from File

Enable Edit Layers

☒

World Partition Grid Size

2

World Partition Region Size

16

Material

None

None

↶

🔍

☐ Default Layer Asset Path

/Game/Pack_C06_Level/C06_Level_

📁

Layers

⚡

Hint: Assign a material to see the landscape layers it handles. Use Auto-Fill button to fill the landscape with a material.

Location

0.0

0.0

0.0

Rotation

0.0

0.0

0.0

Scale

100.0

100.0

100.0

Section Size

63×63 Quads

▼

Sections Per Component

1×1 Section

▼

Number of Components

8

×

8

Overall Resolution

505

×

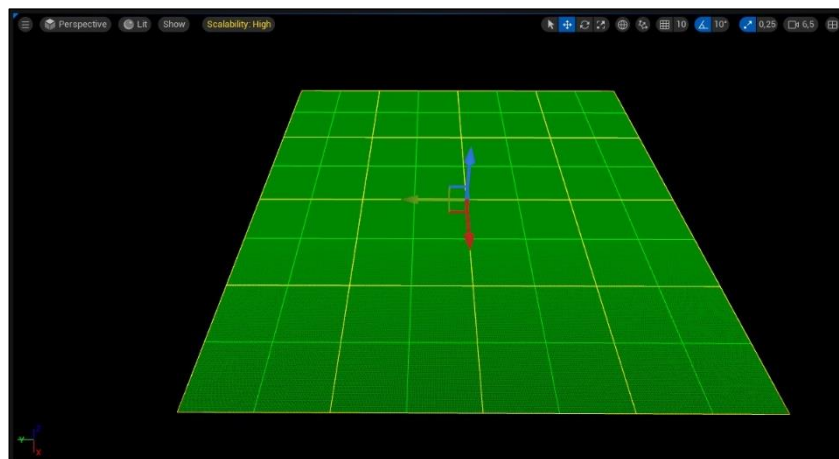
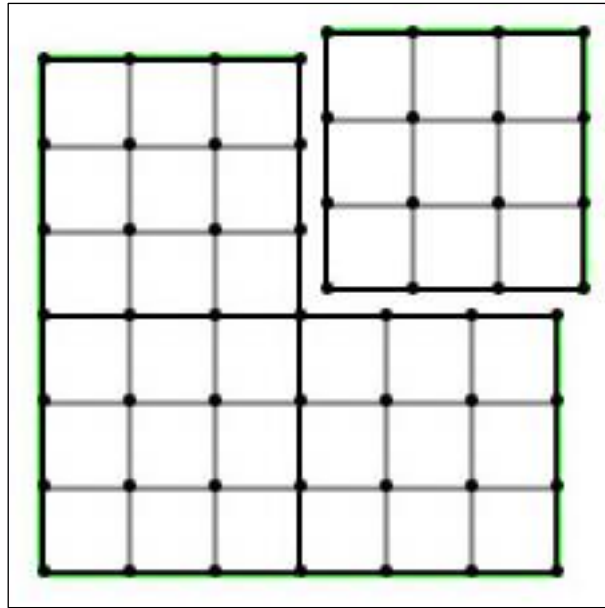
505

Total Components

64

Fill World

Create



New

Import

Select

Add

Delete

Move

Resize

Splines

Blueprint

▼ New Landscape

Create New

Import from File

Enable Edit Layers

☒

World Partition Grid Size

2

World Partition Region Size

16

Material

None

None

↶

📁

☐ Default Layer Asset Path

/Game/Pack_C06_Level/C06_Level_

📁

Layers

Hint: Assign a material to see the landscape layers it handles. Use Auto-Fill bu

Location

0.0

0.0

0.0

Rotation

0.0

0.0

0.0

Scale

100.0

100.0

100.0

Section Size

63×63 Quads

▼

Sections Per Component

1×1 Section

▼

Number of Components

8

×

8

Overall Resolution

505

×

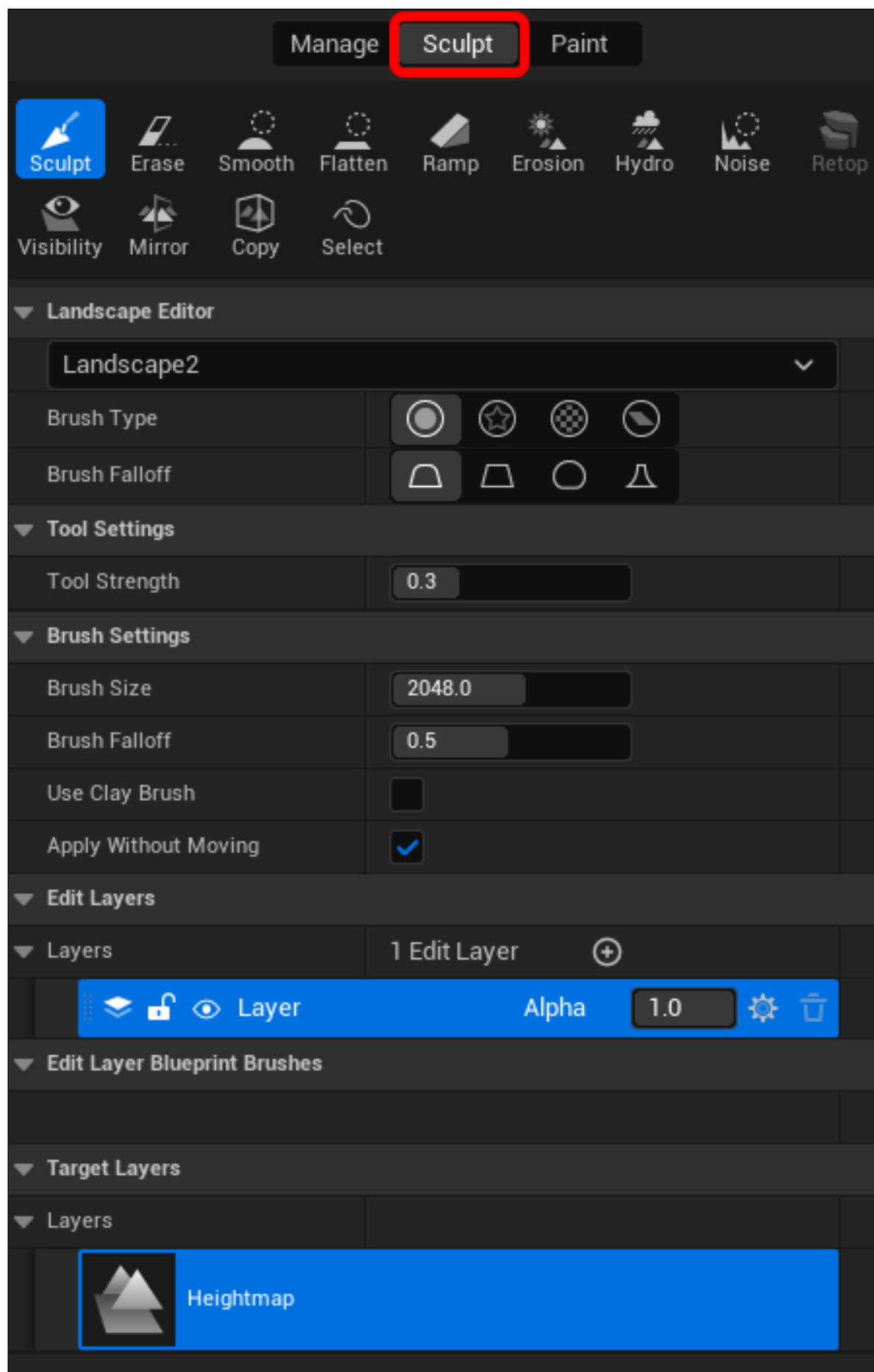
505

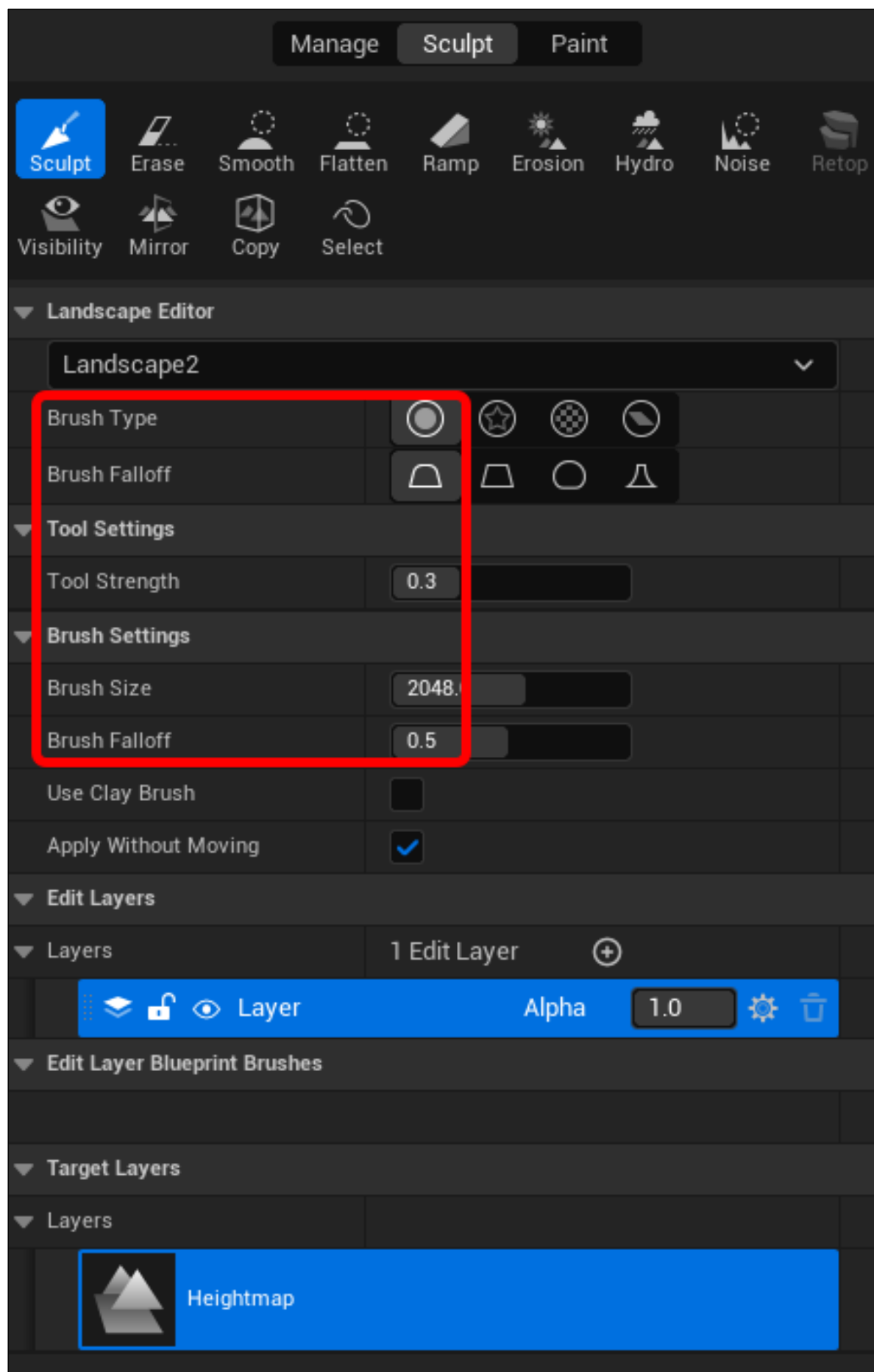
Total Components

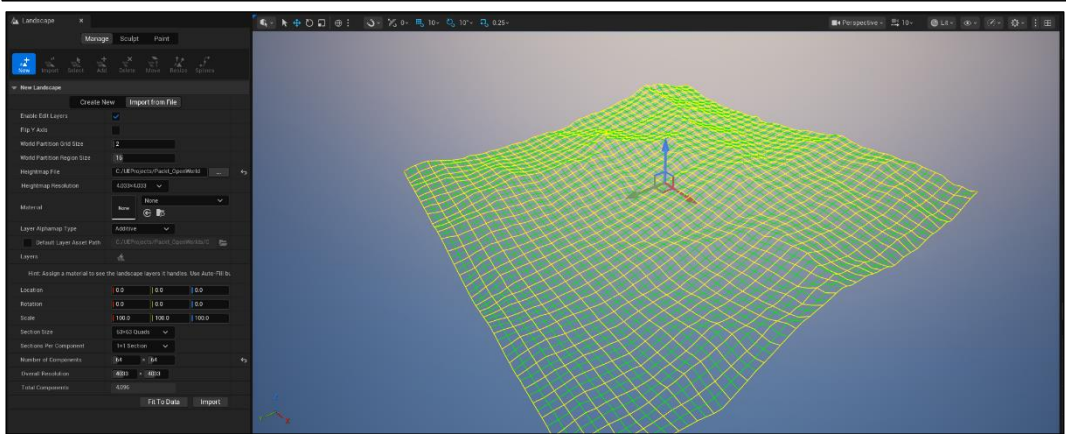
64

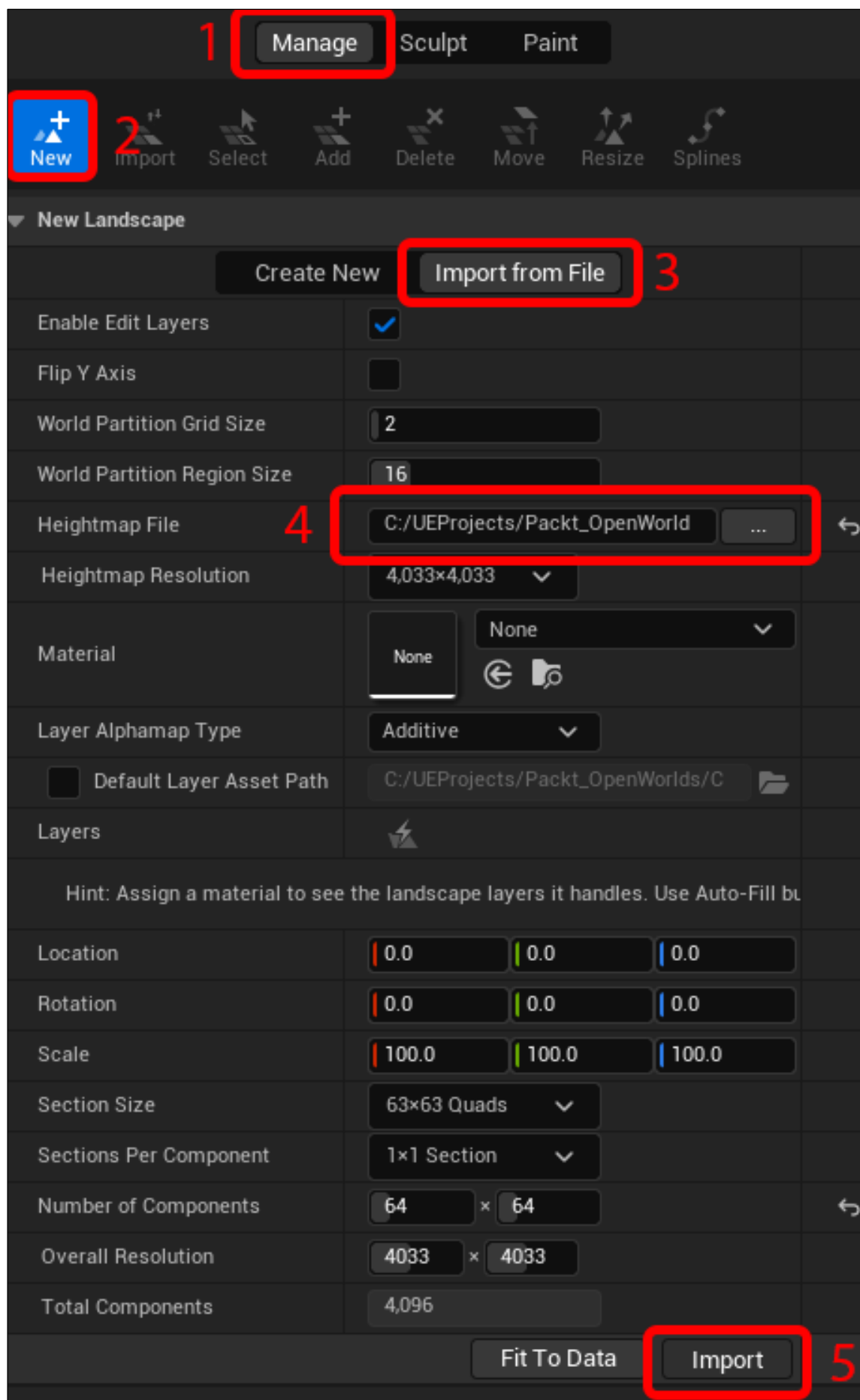
Fill World

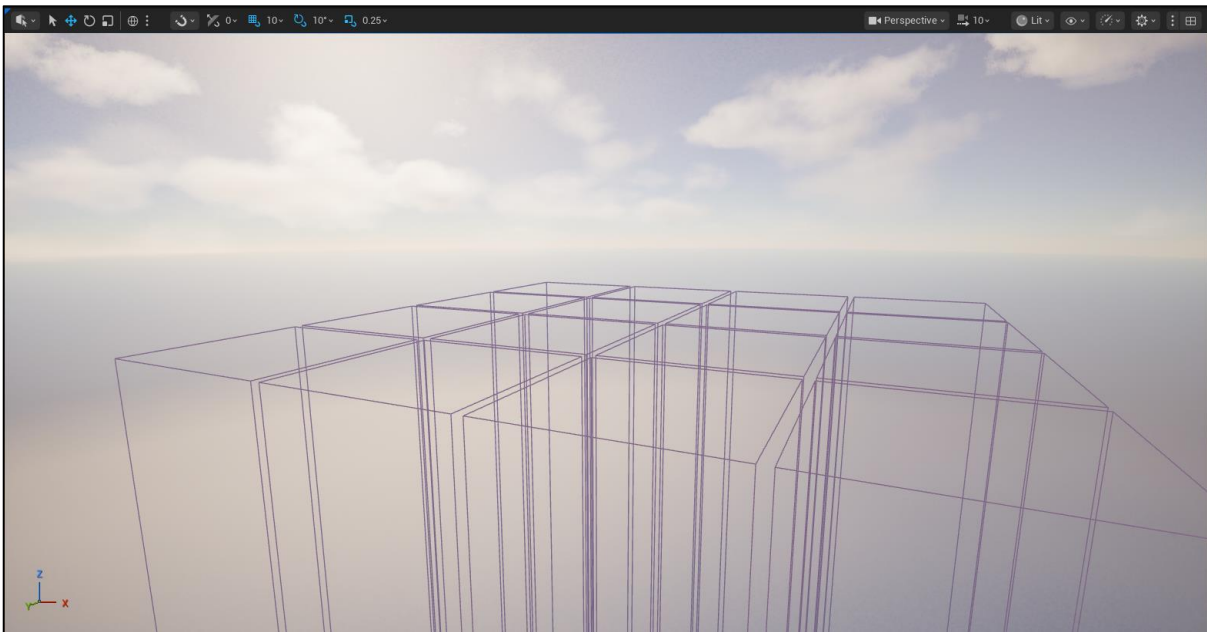
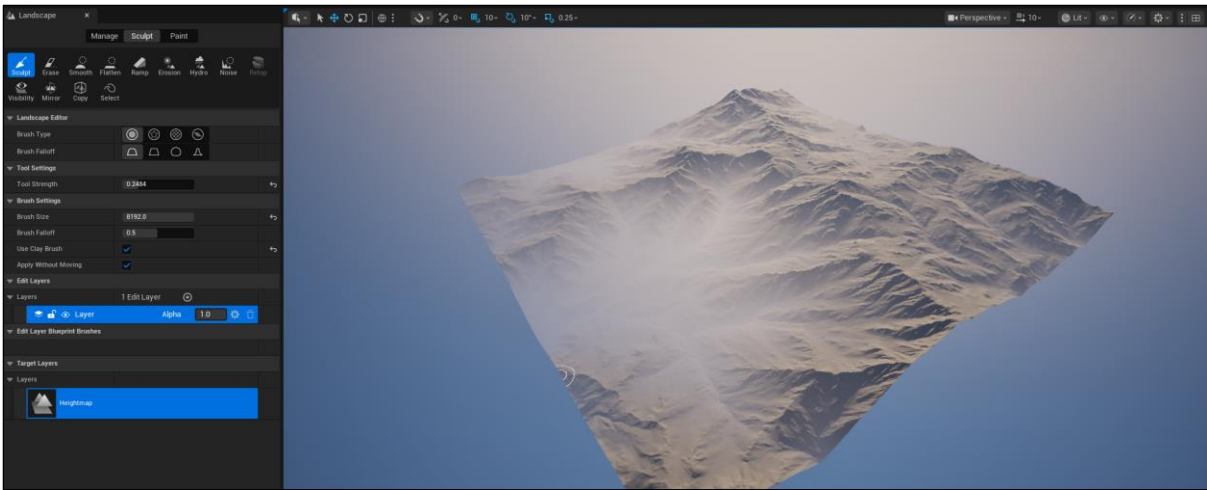
Create

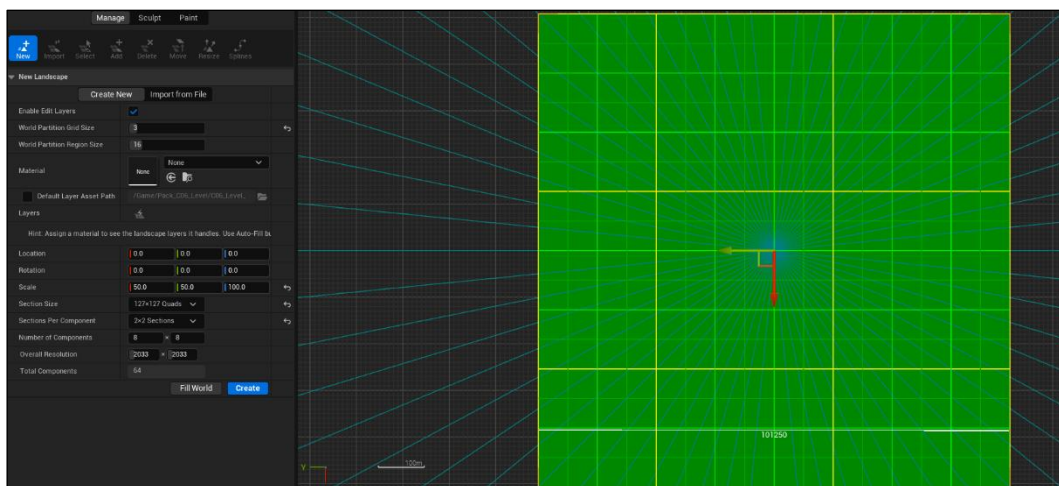
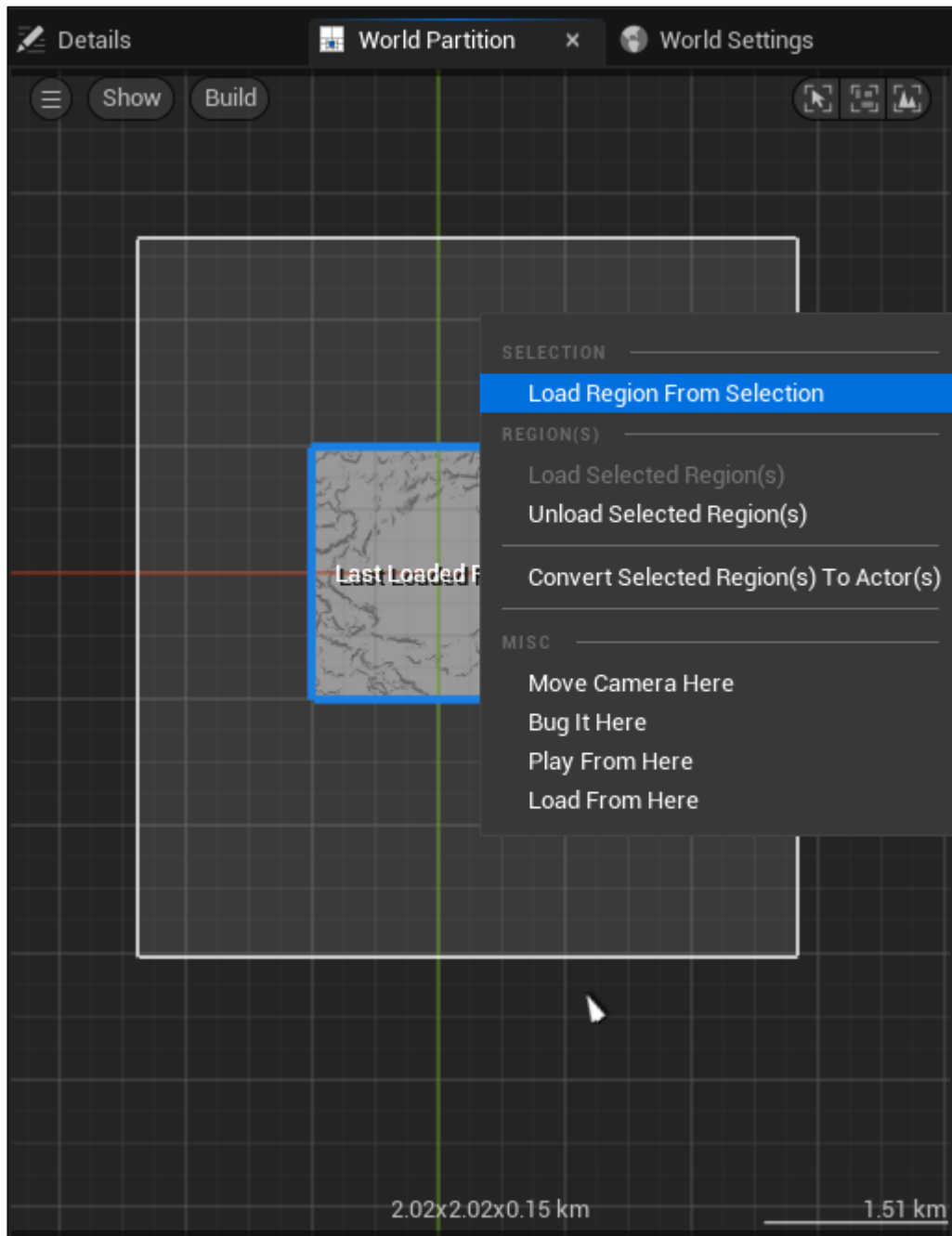


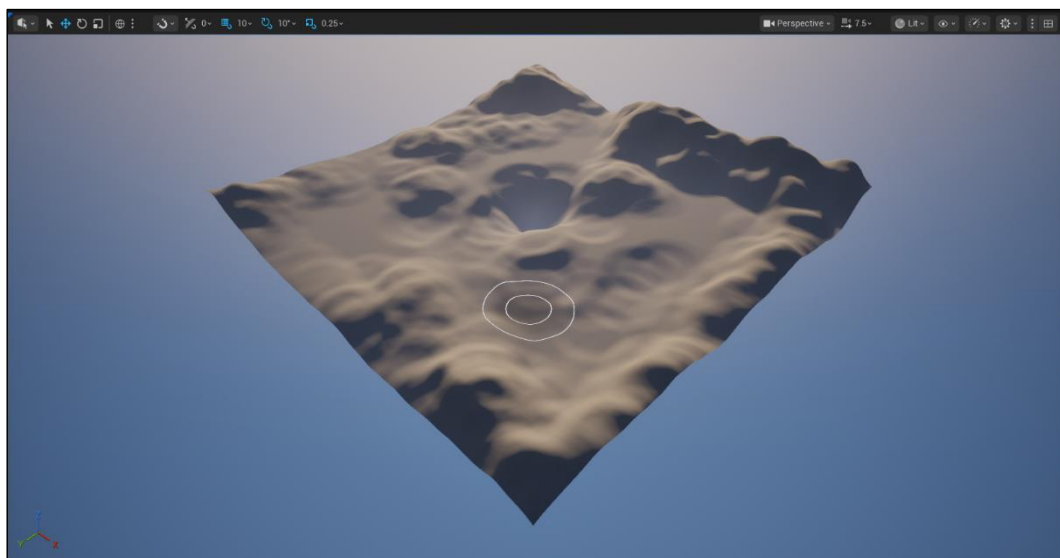
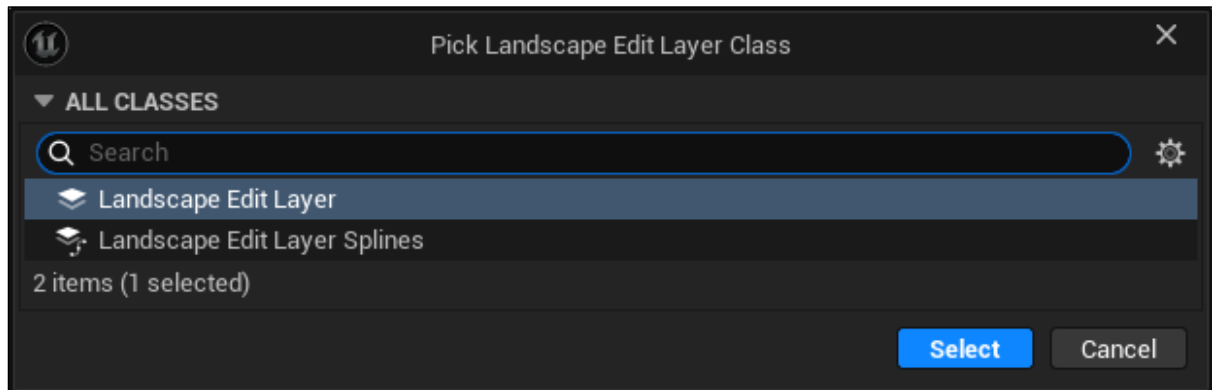
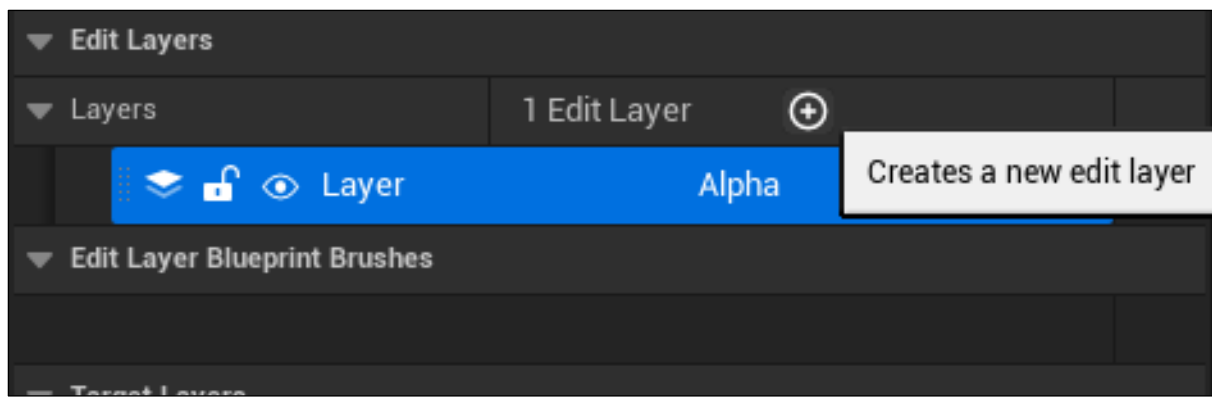


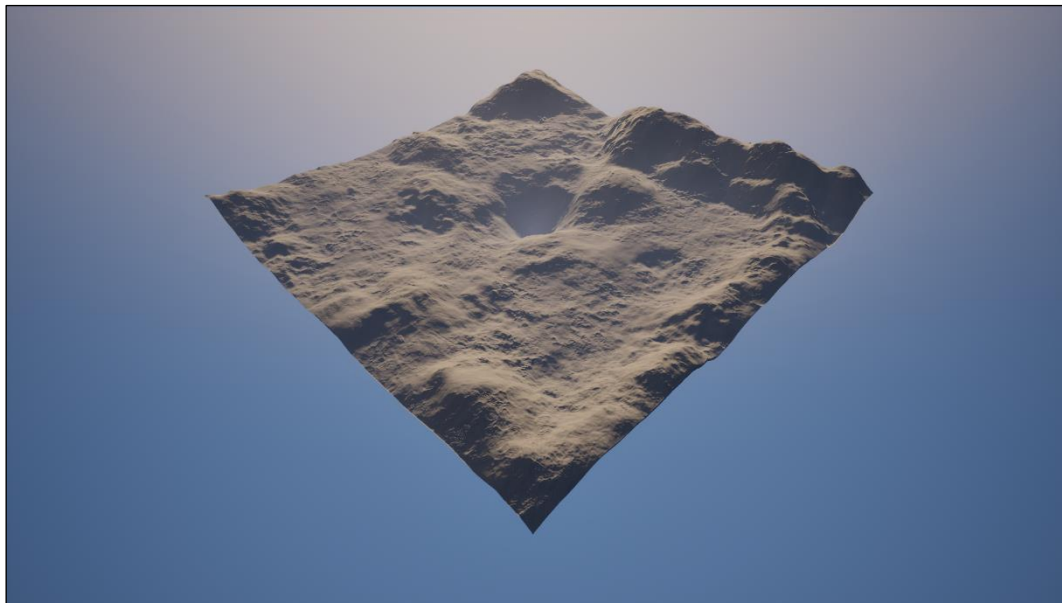
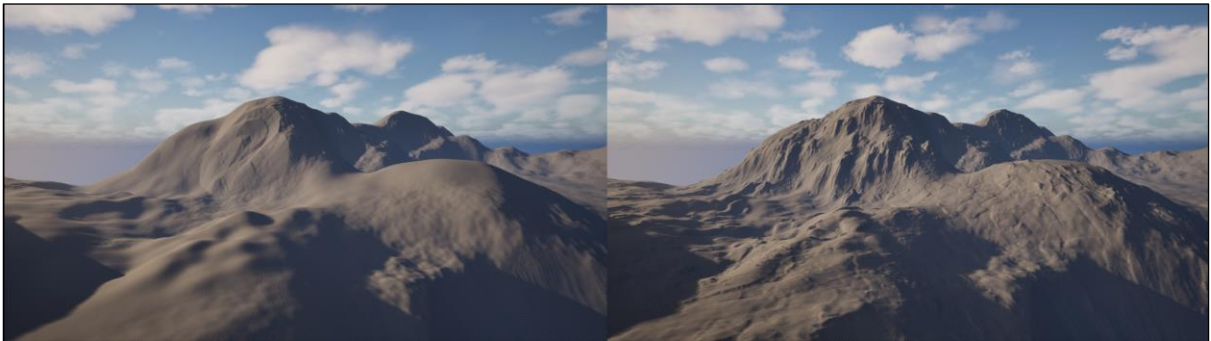
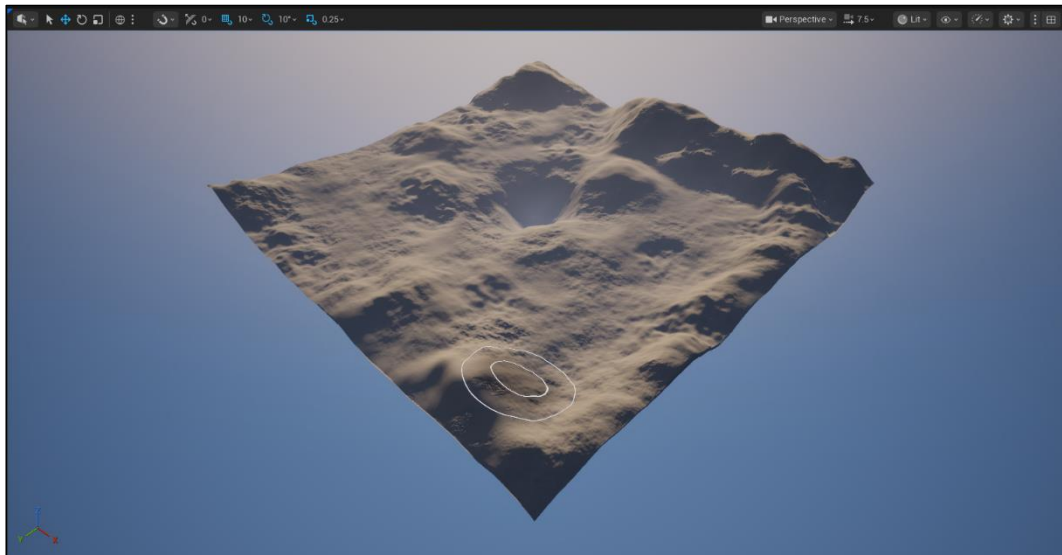






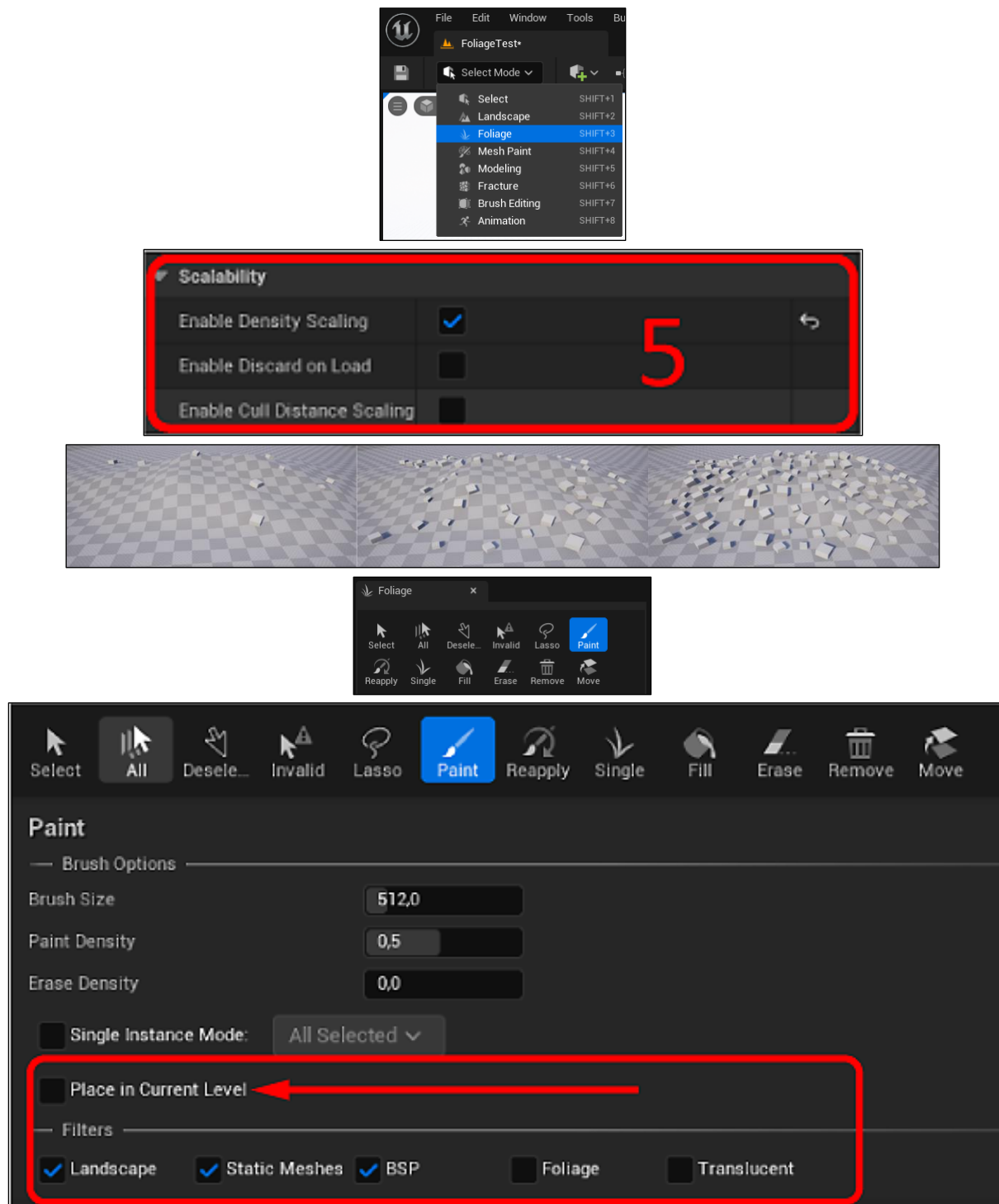


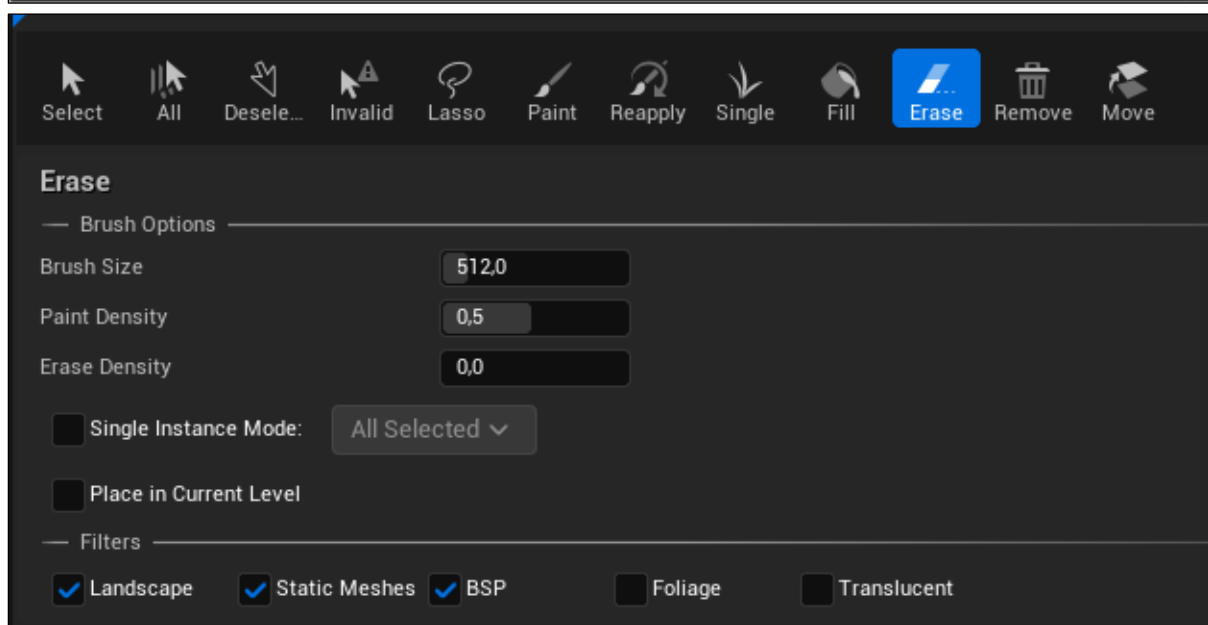
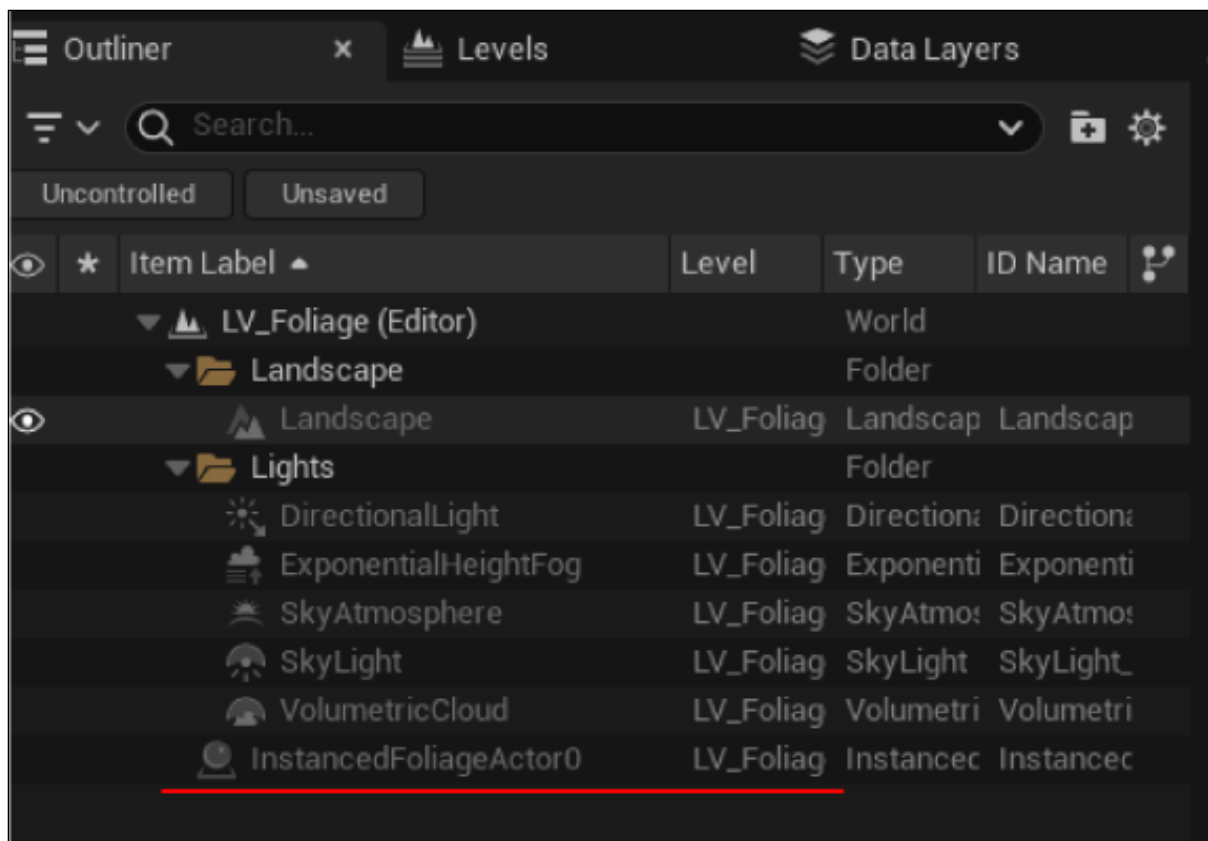


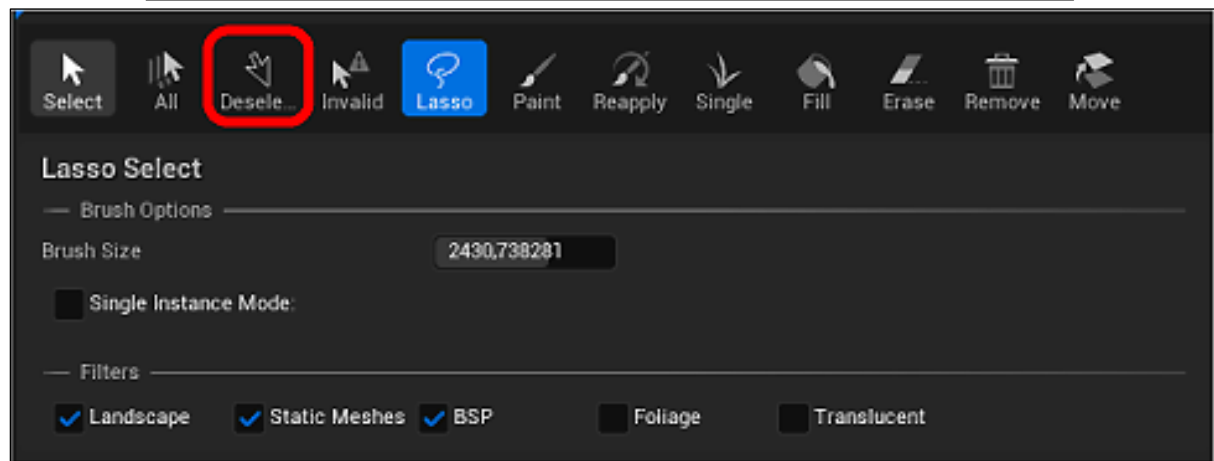
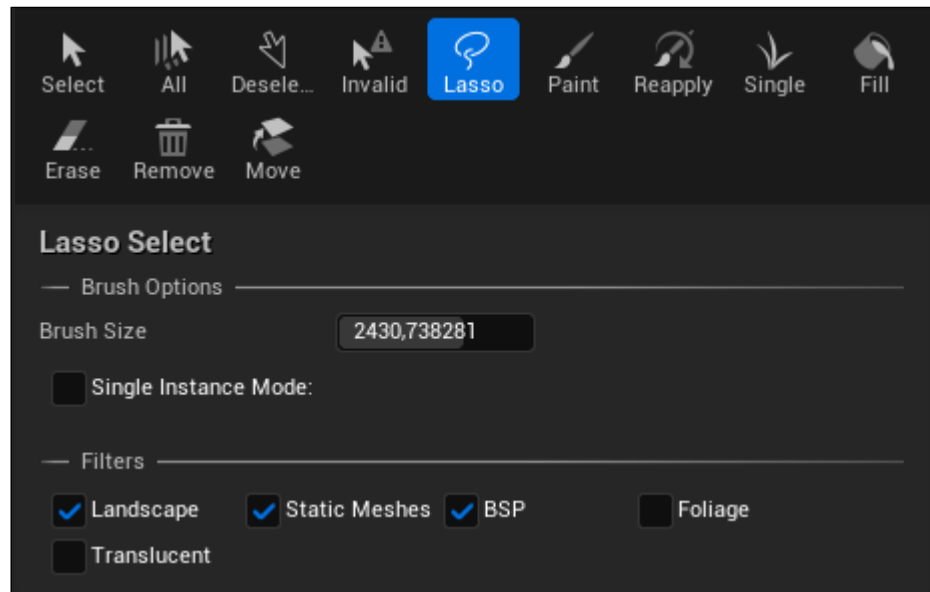


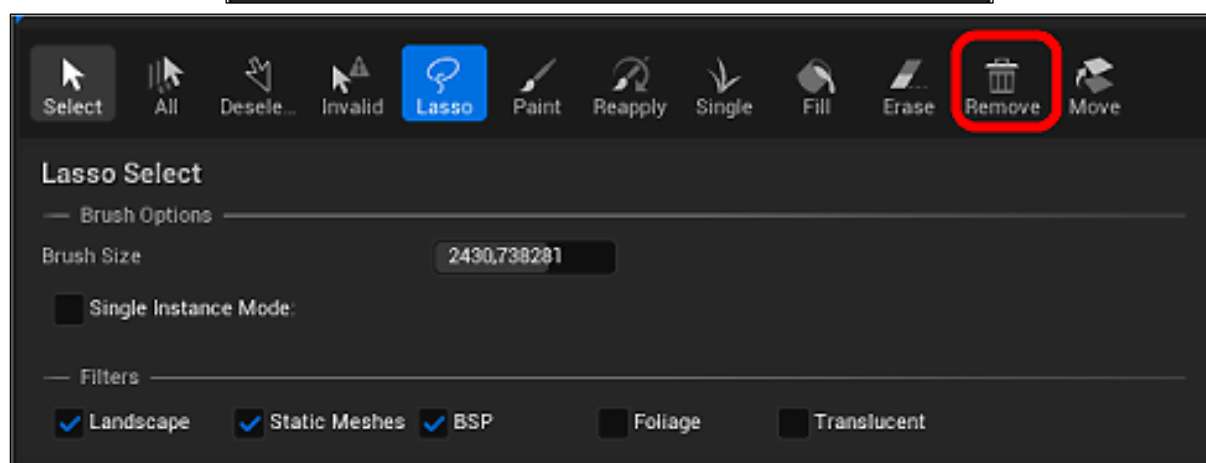
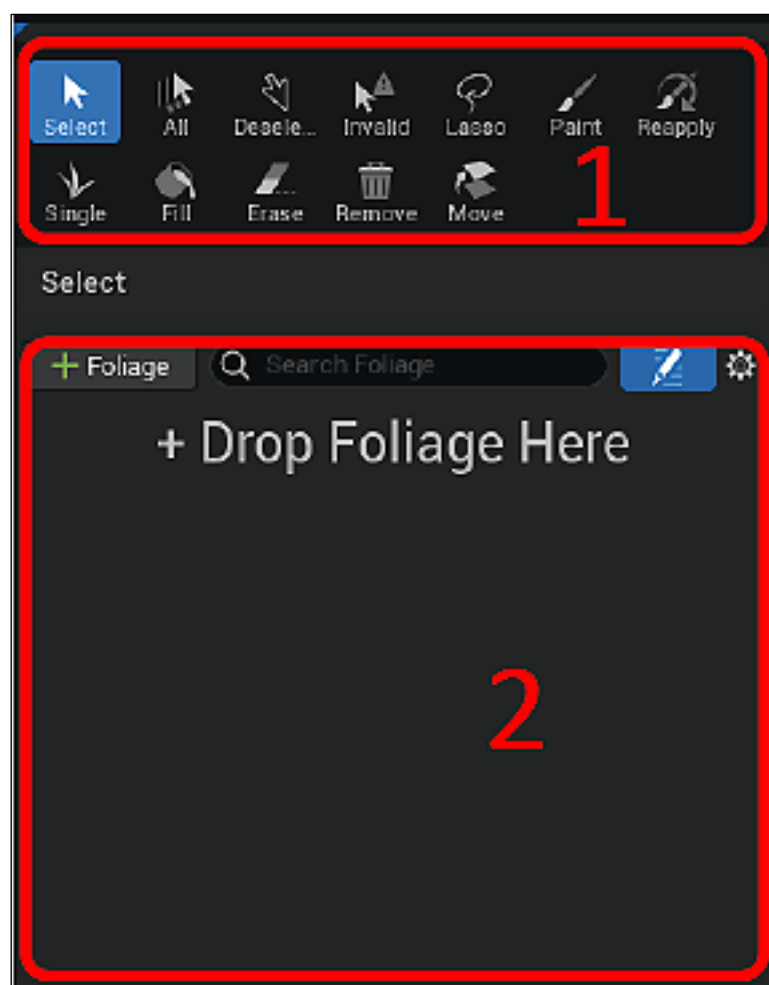


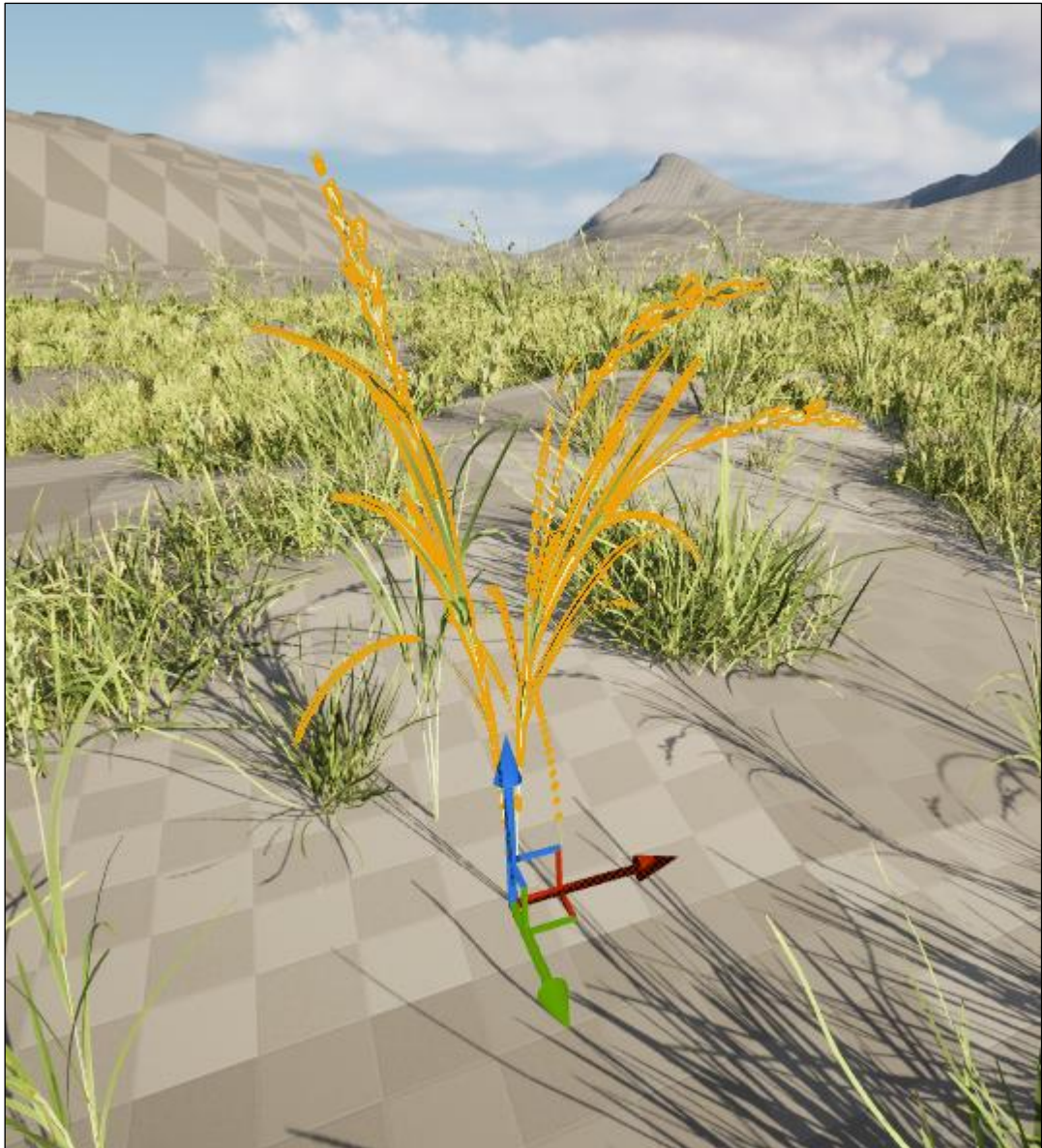
Chapter 7: Populating Your World with Foliage











Toolbar icons: Select, All, Desele..., Invalid, Lasso, **Paint**, Reapply, Single, Fill, Erase, **Remove**, **Move**

Paint

— Brush Options —

Brush Size: 512,0

Paint Density: 0,5

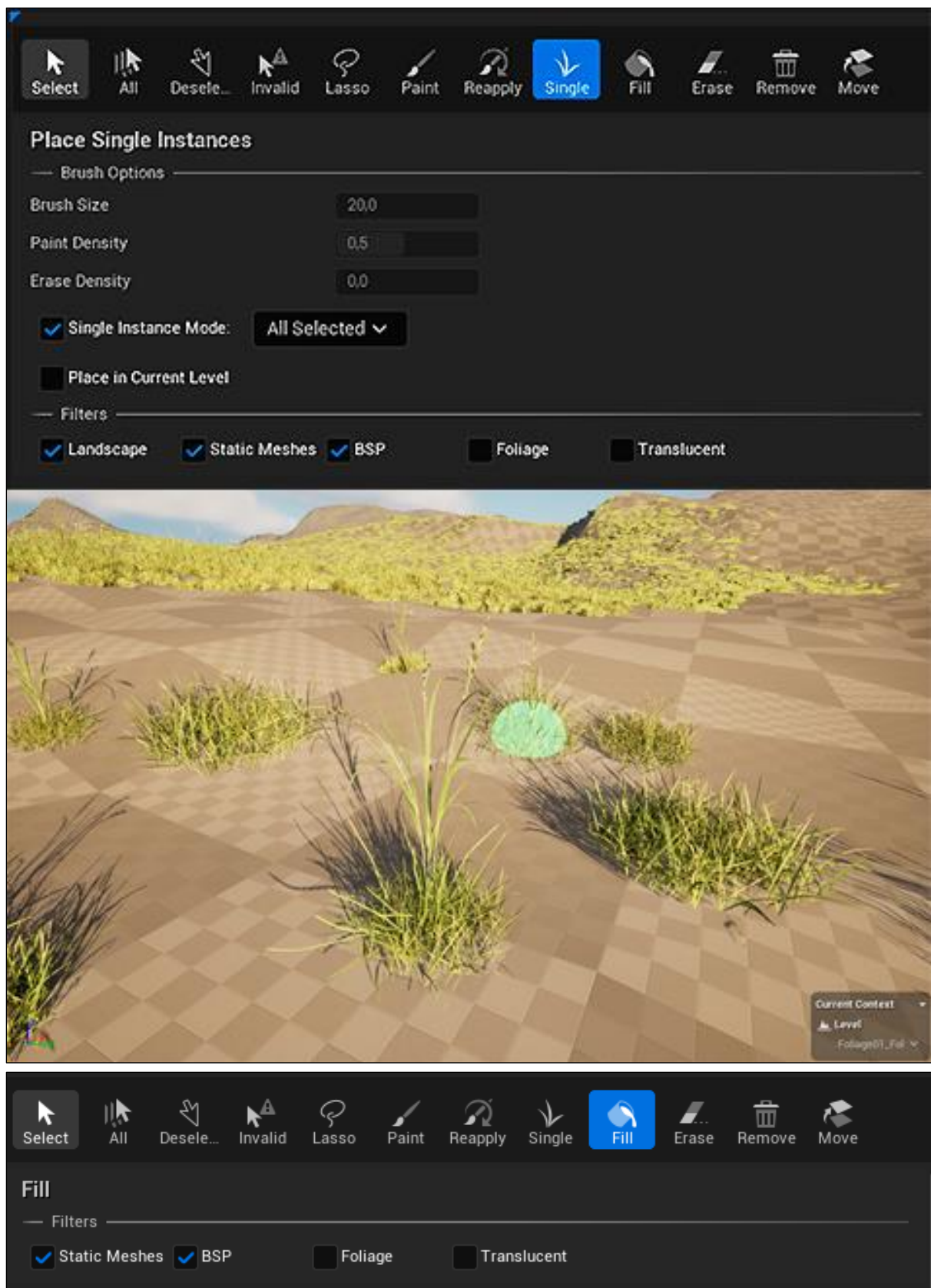
Erase Density: 0,0

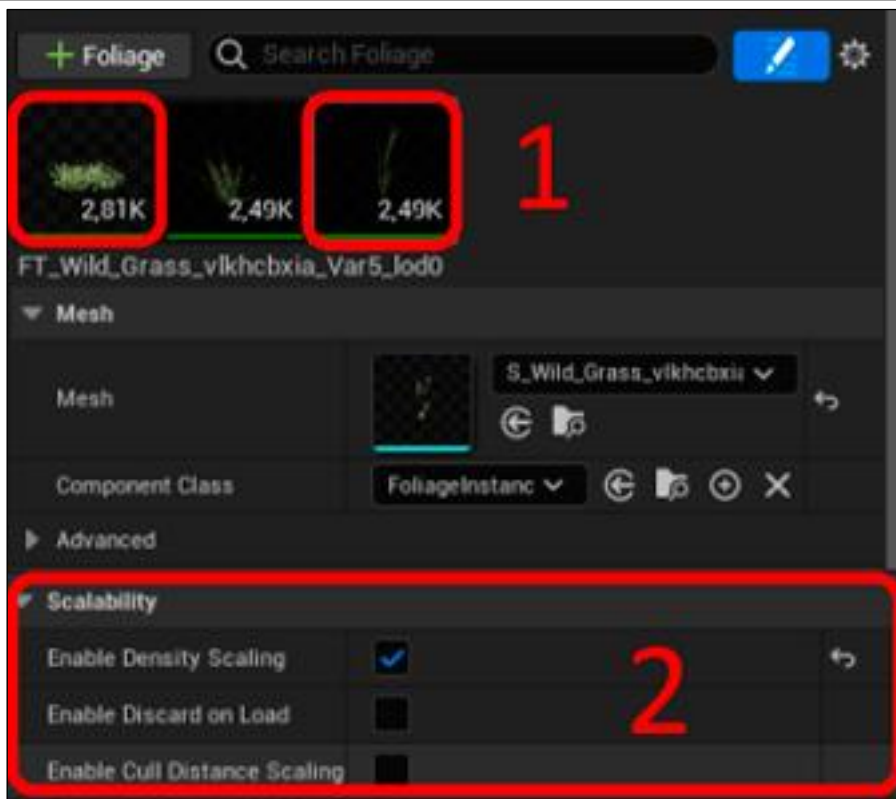
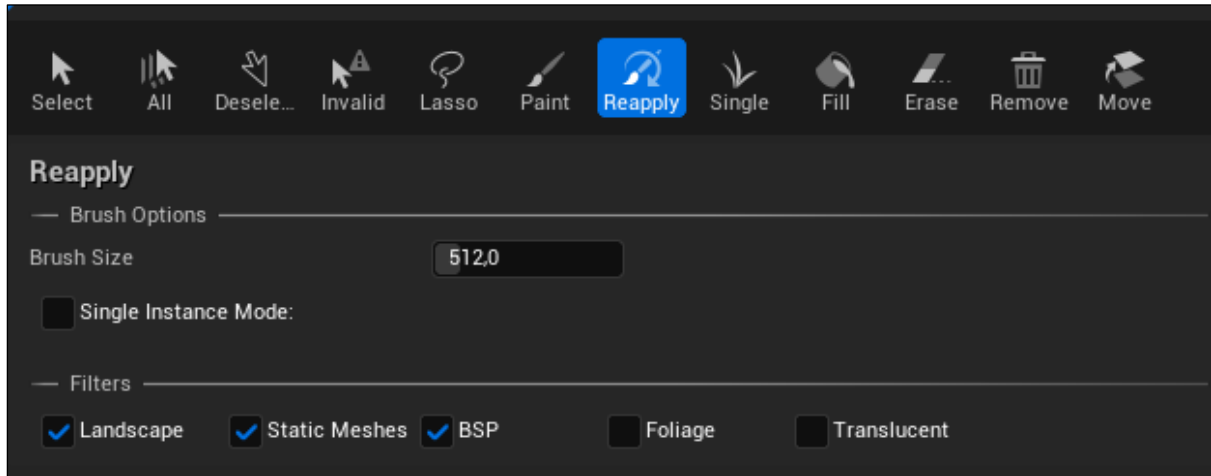
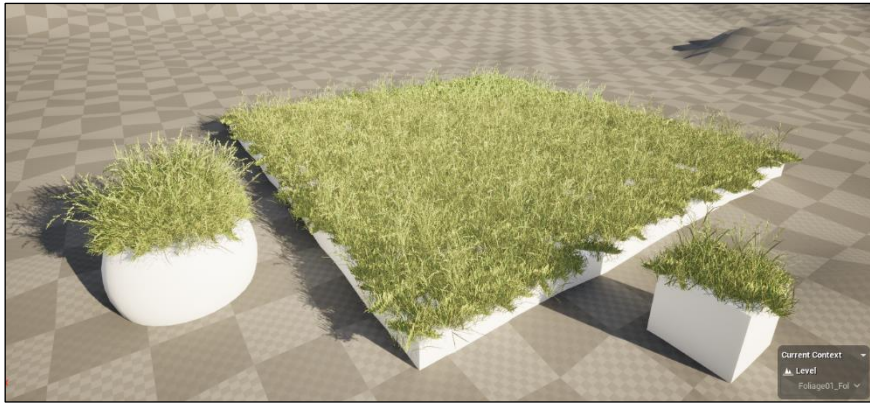
☐ Single Instance Mode: All Selected ▾

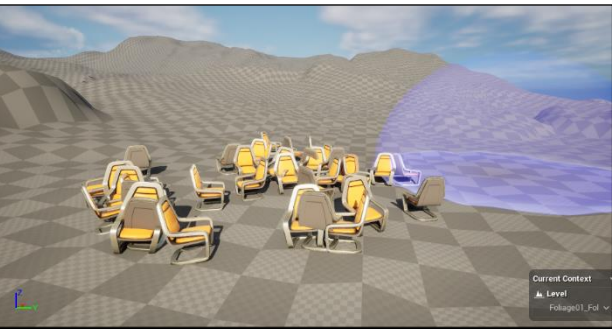
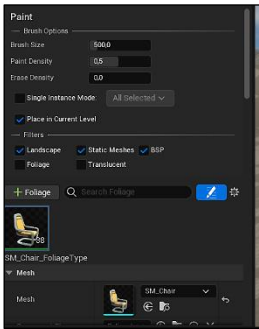
☐ Place in Current Level

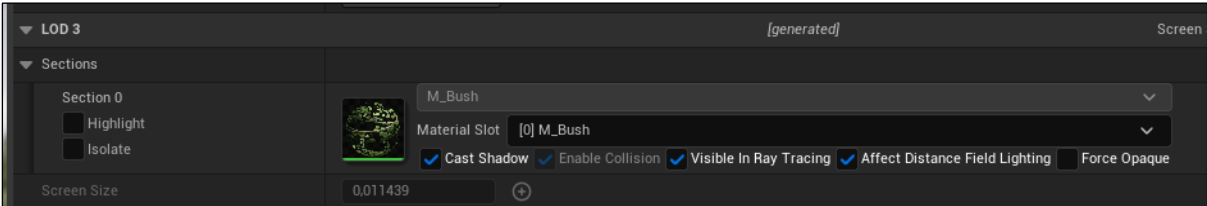
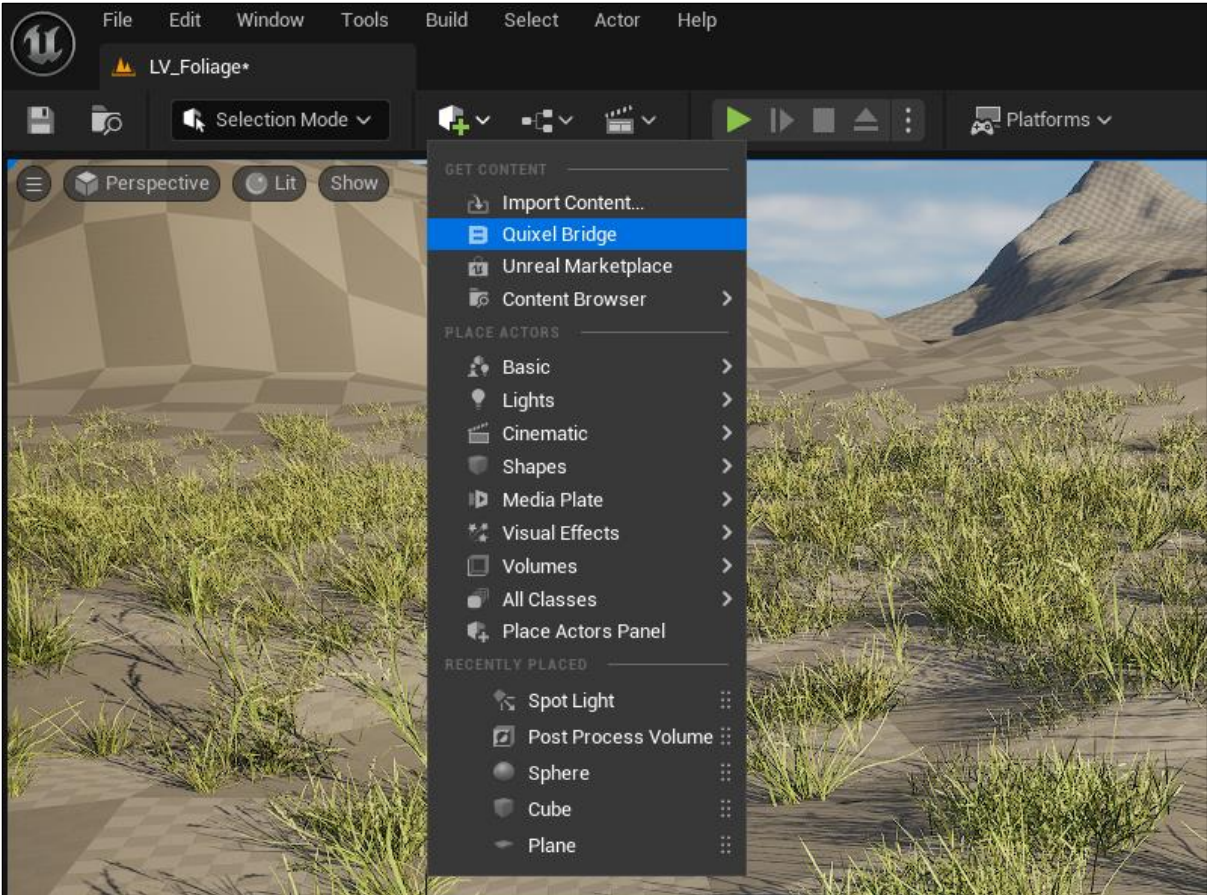
— Filters —

☒ Landscape ☒ Static Meshes ☒ BSP ☐ Foliage ☐ Translucent

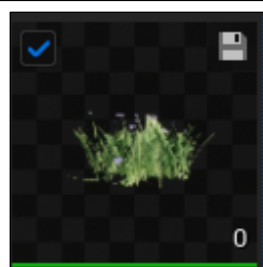
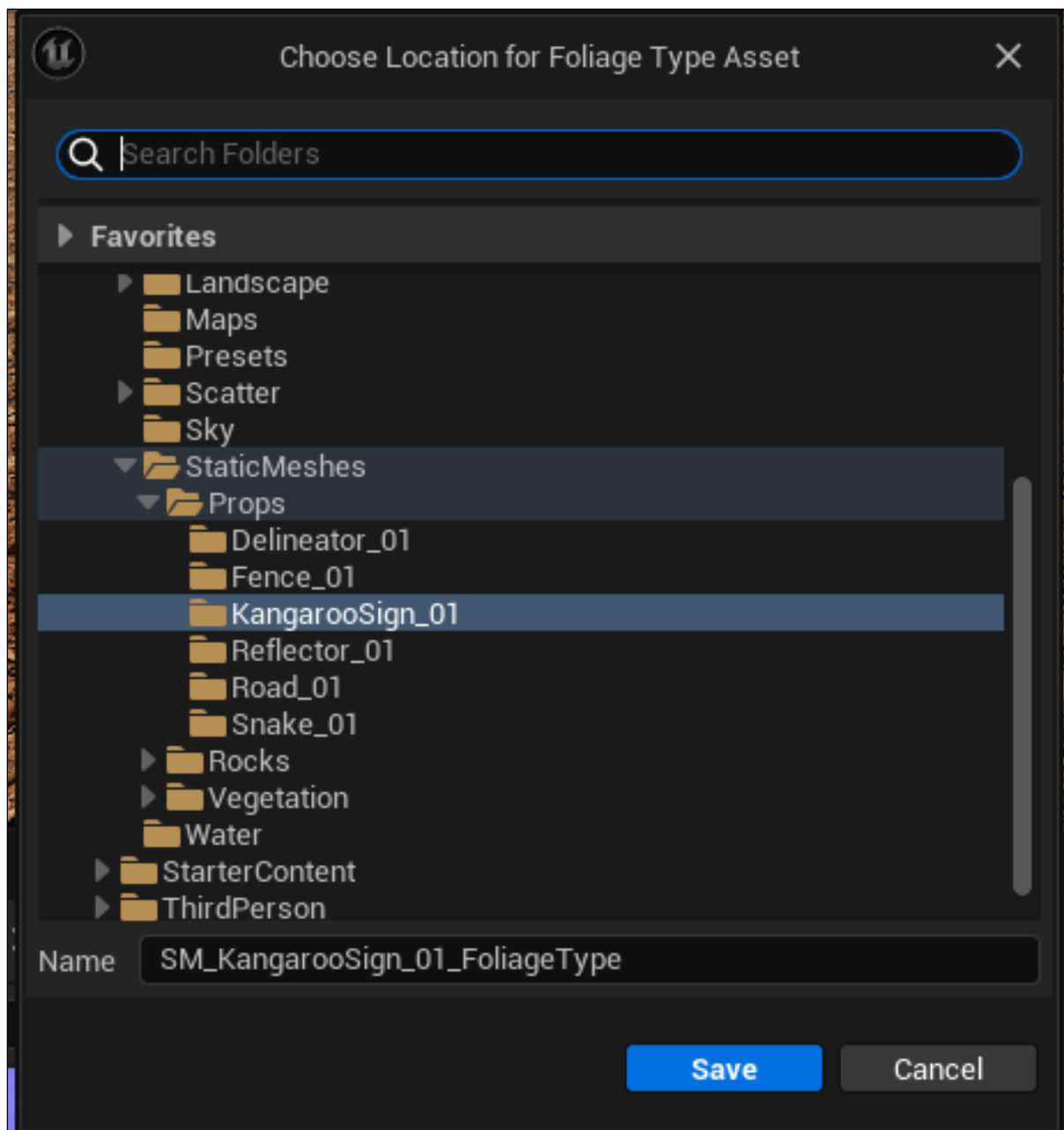


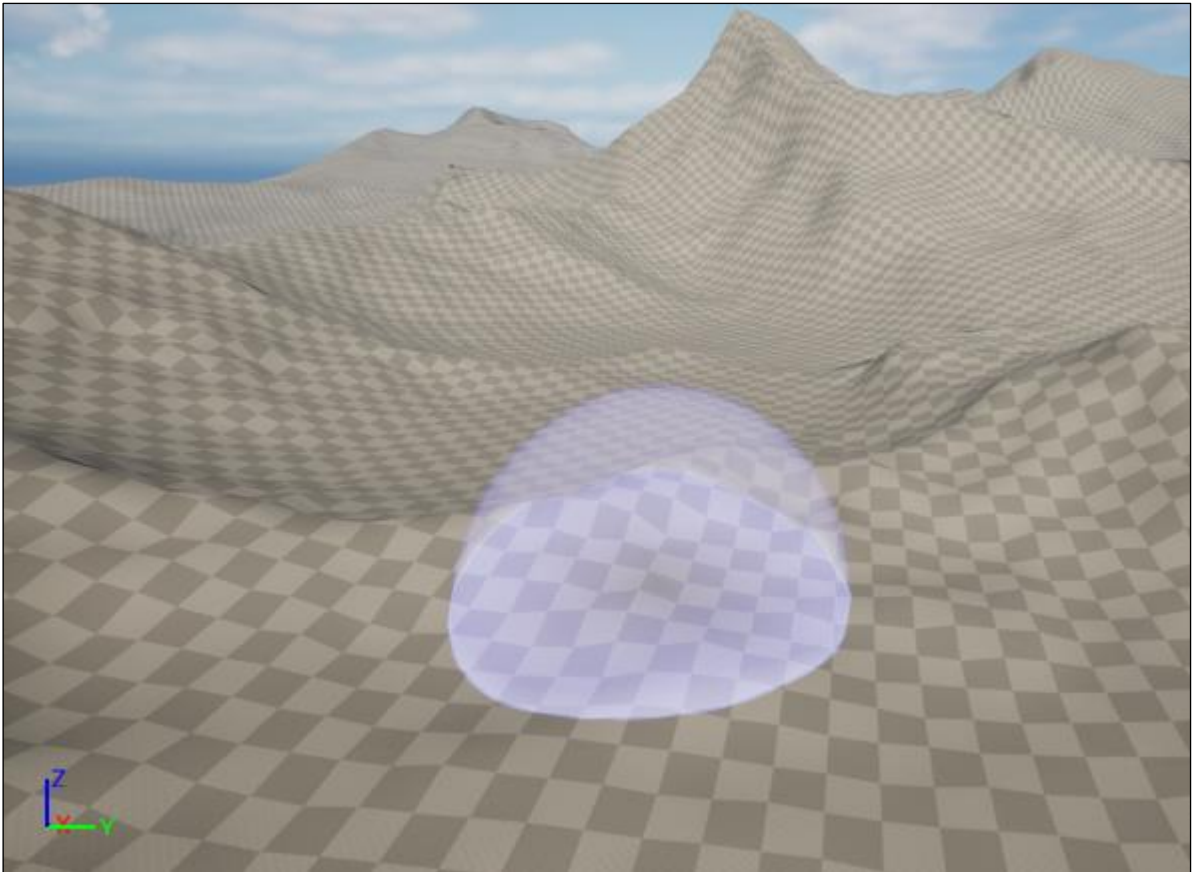






Use as Occluder	☐
Visible in Ray Tracing	☒
Evaluate World Position Offset	☒
World Position Offset Disable Distance	2500





Mesh

1

S_Wild_Grass_vlkhcbxia_Var11_Jod3

Component Class

EllipsoidInstance(StaticMeshCo)

Advanced

Painting

Density / 1Kuu

100.0

Radius

0.0

Single Instance Mode Override Radius

Single Instance Mode Radius

0.0

Scaling

Uniform

Scale X

Min 1.0

Max 1.0

Advanced

Placement

Z Offset

Min 0.0

Max 0.0

Align to Normal

☒

Average Normal

☐

Average Normal Single Component

☒

Align Max Angle

0.0

Random Yaw

☒

Random Pitch Angle

0.0

Ground Slope Angle

Min 0.0

Max 45.0

Height

Min -262144.0

Max 262144.0

Advanced

Inclusion Landscape Layers

0 Array element

Exclusion Landscape Layers

0 Array element

Collision with World

☐

Average Normal Sample Count

10

3

Instance Settings

Mobility

Static

Movable

Cull Distance

Min 0

Max 0

Cast Shadow

☒

Affect Dynamic Indirect Lighting

☒

Affect Distance Field Lighting

☐

Cast Dynamic Shadow

☒

Cast Static Shadow

☒

Cast Contact Shadow

☒

Light Map Resolution

8

Collision Presets

NoCollision

Custom Navigable Geometry

Yes

Translucency Sort Priority

0

Advanced

Cast Shadow as Two Sided

☐

Receives Decals

☐

Shadow Cache Invalidation Behavior

Auto

Lightmap Type

Default

Use as Occluder

☐

Visible in Ray Tracing

☒

Evaluate World Position Offset

☒

World Position Offset Disable Distance

0

Lighting Channels

0

1

2

Render CustomDepth Pass

☐

Custom Depth Stencil Write Mask

Default

CustomDepth Stencil Value

0

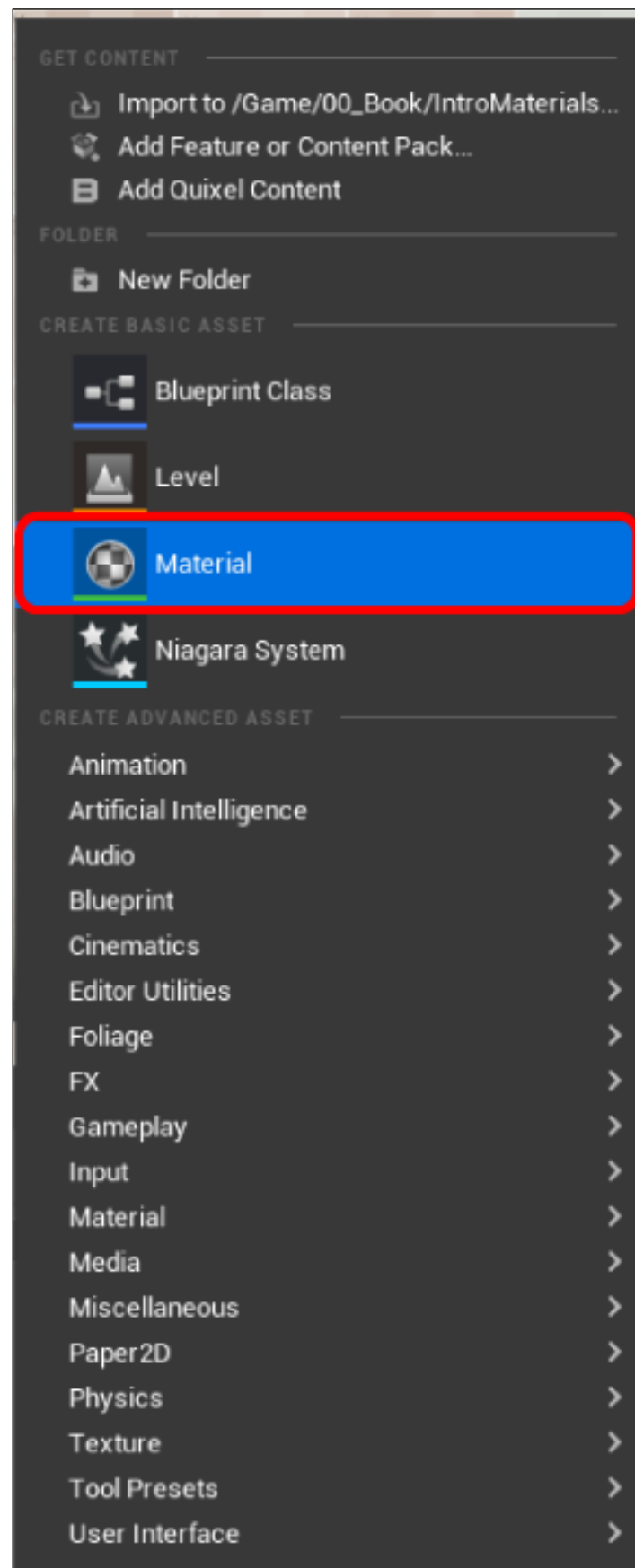
4

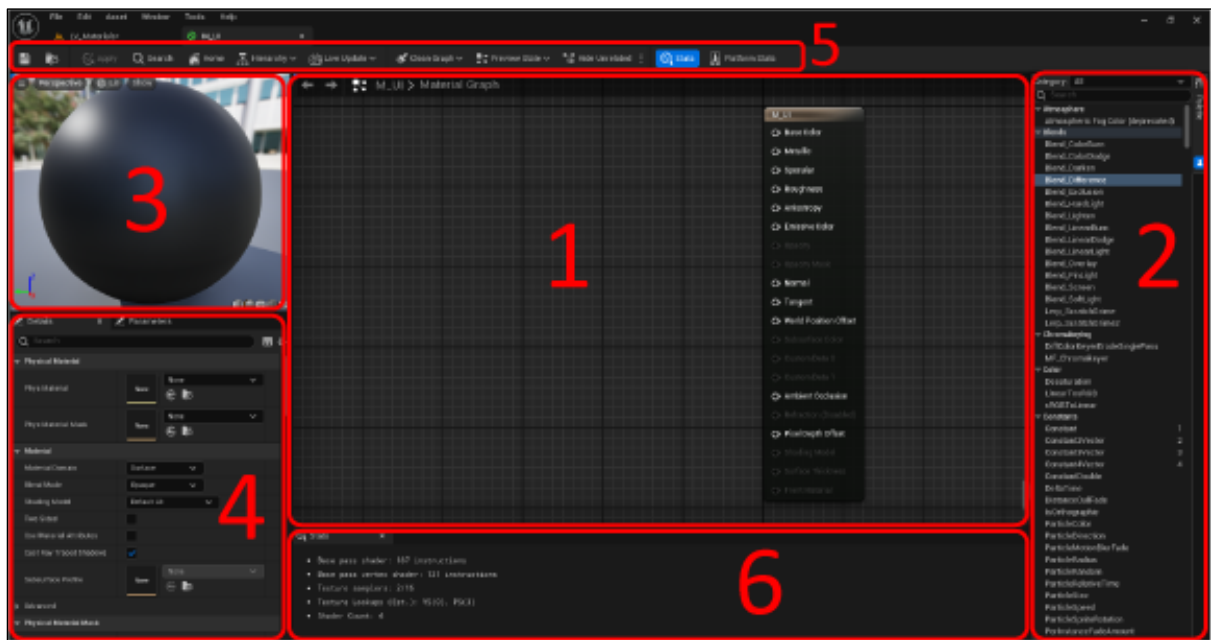
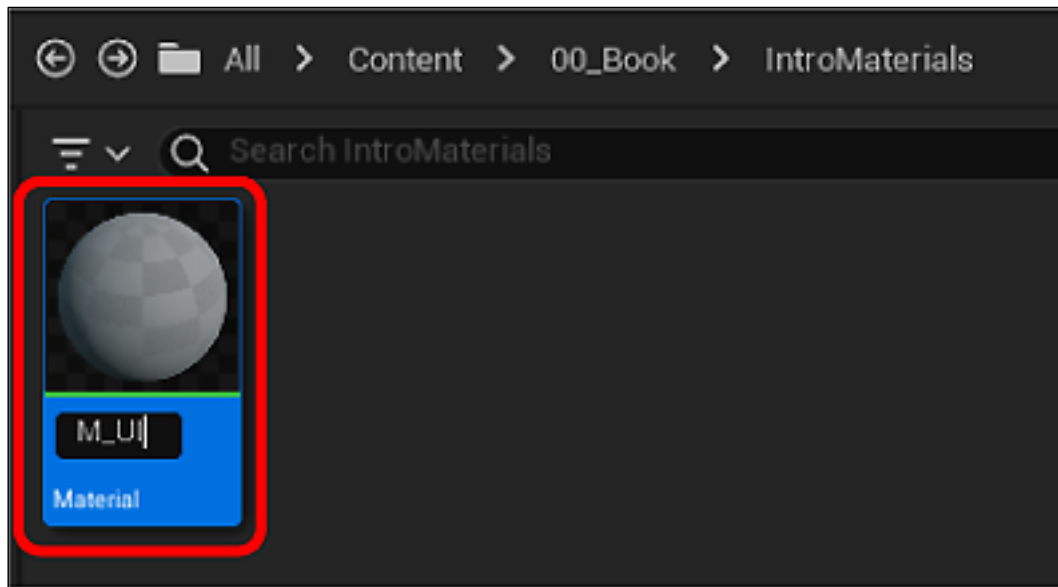
▼ Instance Settings		
Mobility	Static Movable	
Cull Distance	Min 0 Max 0	
Cast Shadow	☒	
Affect Dynamic Indirect Lighting	☒	
Affect Distance Field Lighting	☐	
Cast Dynamic Shadow	☒	
Cast Static Shadow	☒	
Cast Contact Shadow	☒	
☐ Light Map Resolution	8	
► Collision Presets	NoCollision ▼	
Custom Navigable Geometry	Yes ▼	
Translucency Sort Priority	0	
▼ Advanced		
Cast Shadow as Two Sided	☐	
Receives Decals	☐	
Shadow Cache Invalidation Behavior	Auto ▼	
Lightmap Type	Default ▼	
Use as Occluder	☐	
Visible in Ray Tracing	☒	
Evaluate World Position Offset	☒	
World Position Offset Disable Distance	0	
► Lighting Channels	0 1 2	
Render CustomDepth Pass	☐	
Custom Depth Stencil Write Mask	Default ▼	
CustomDepth Stencil Value	0	

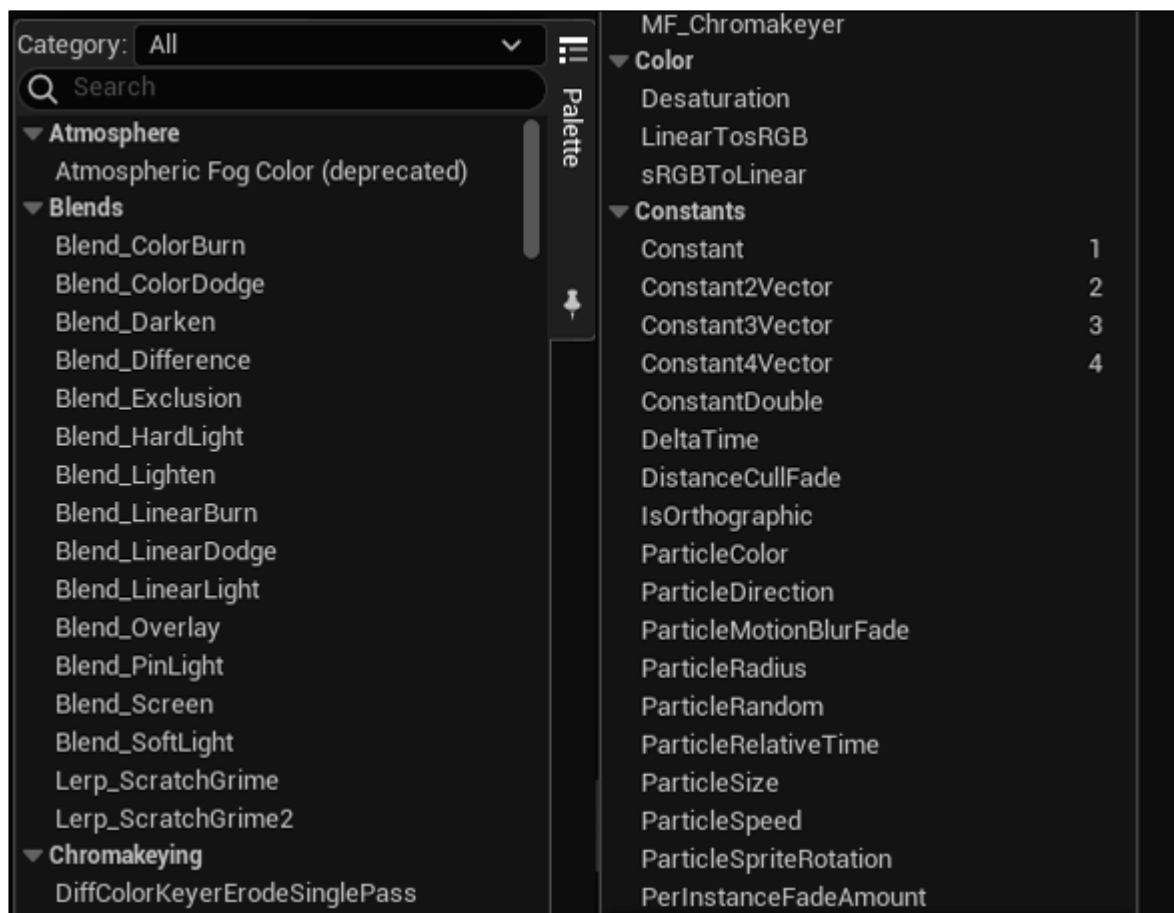
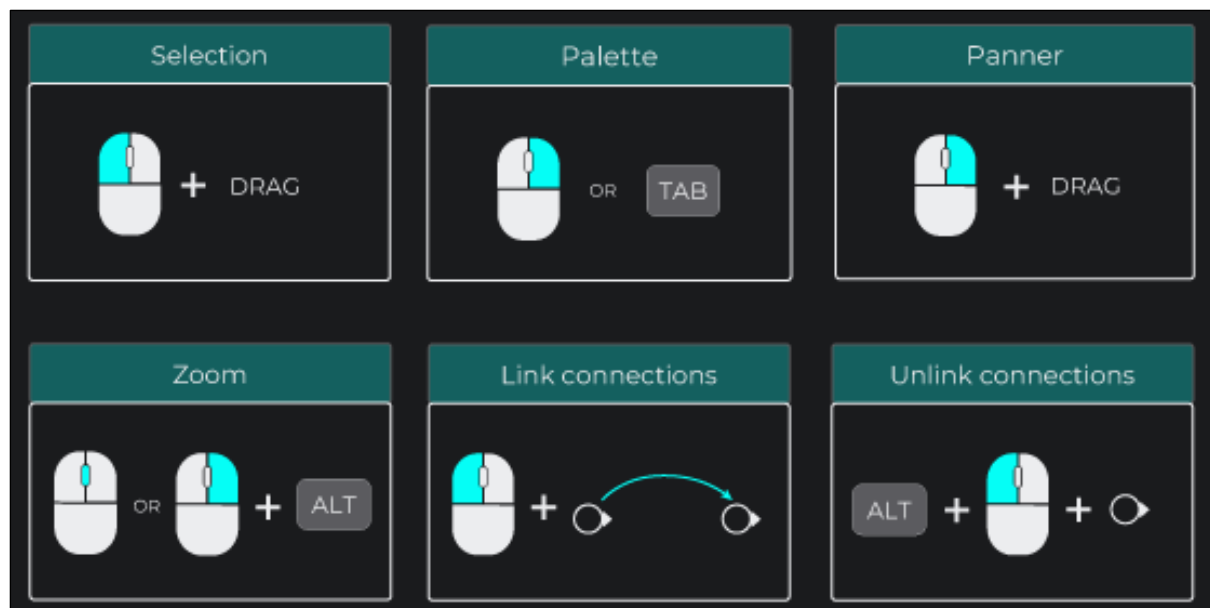
▼ Instance Settings

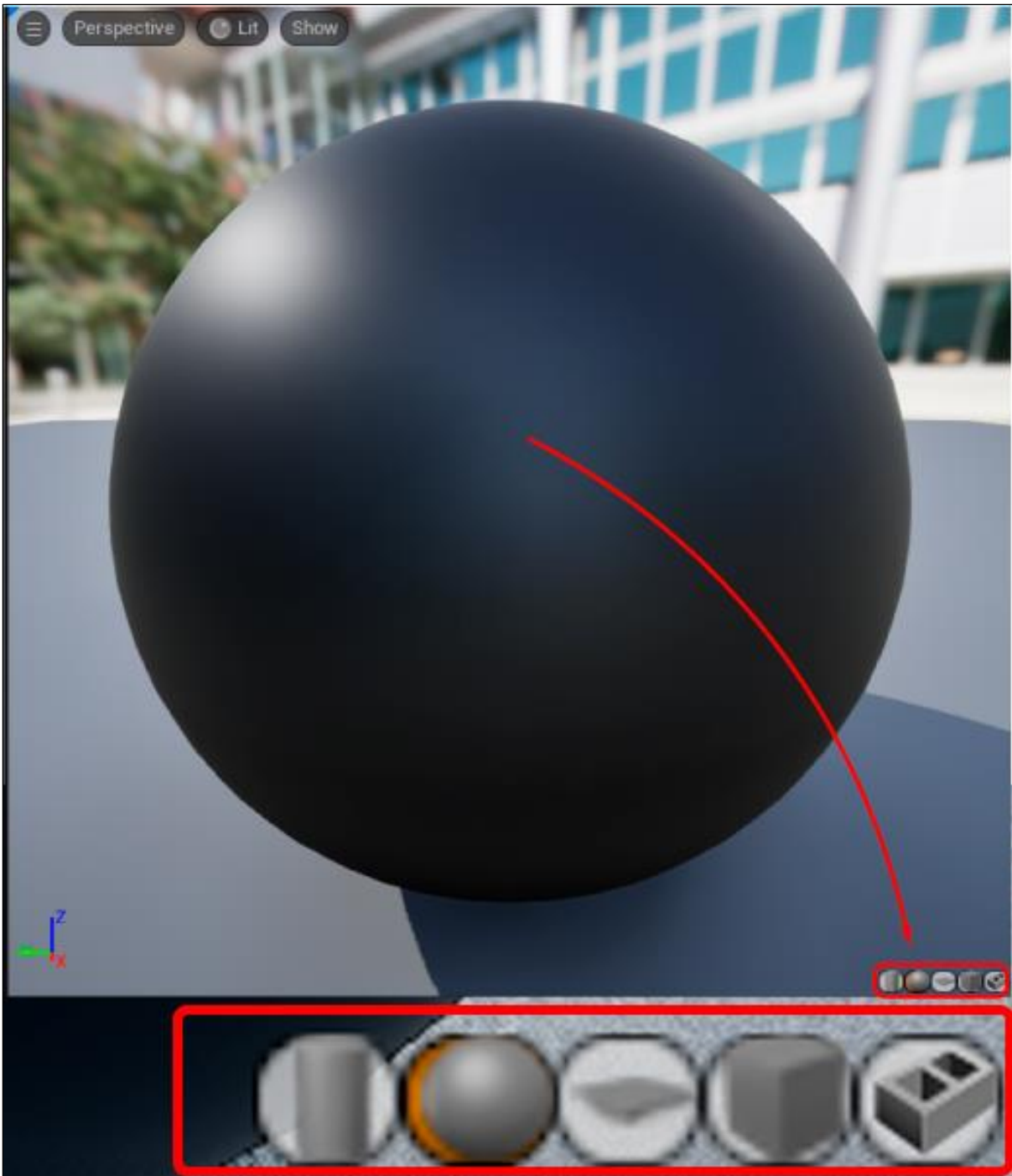
Mobility	StaticMovable	
Cull Distance	Min 0	Max 0
Cast Shadow	☒	
Affect Dynamic Indirect Lighting	☒	
Affect Distance Field Lighting	☐	
Cast Dynamic Shadow	☒	
Cast Static Shadow	☒	
Cast Contact Shadow	☒	
☐ Light Map Resolution	8	
► Collision Presets	NoCollision ▼	
Custom Navigable Geometry	Yes ▼	
Translucency Sort Priority	0	
▼ Advanced		
Cast Shadow as Two Sided	☐	
Receives Decals	☐	
Shadow Cache Invalidation Behavior	Auto ▼	
Lightmap Type	Default ▼	
Use as Occluder	☐	
Visible in Ray Tracing	☒	
Evaluate World Position Offset	☒	
World Position Offset Disable Distance	0	
► Lighting Channels	012	
Render CustomDepth Pass	☐	
Custom Depth Stencil Write Mask	Default ▼	
CustomDepth Stencil Value	0	

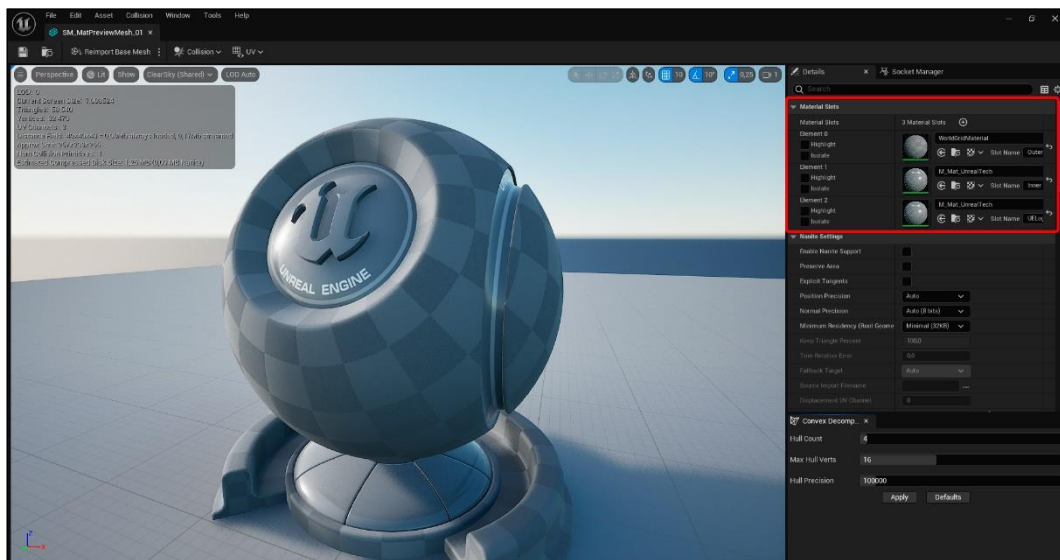
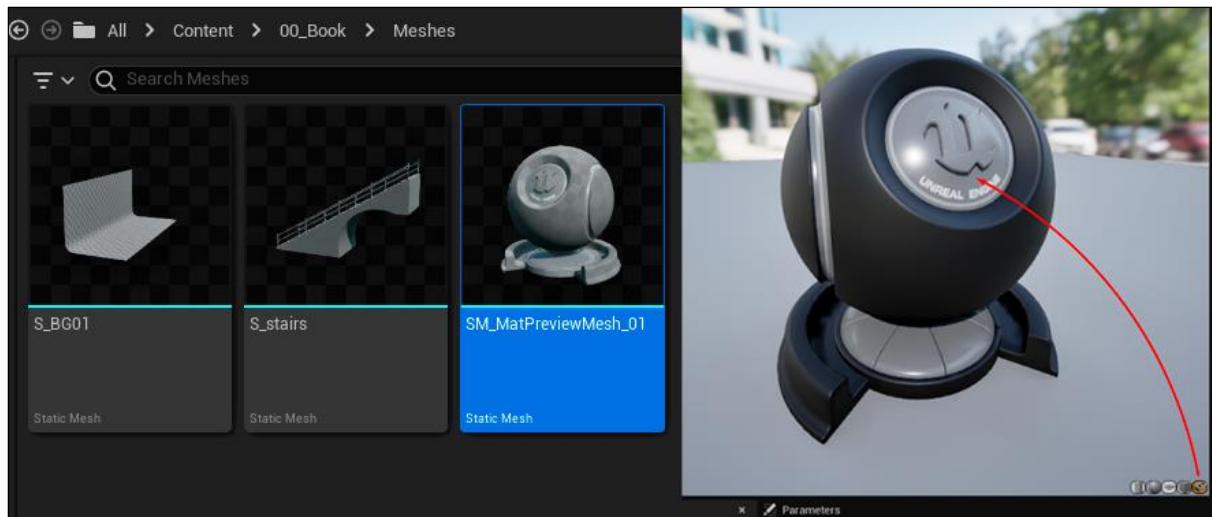
Chapter 8: Introduction to Materials



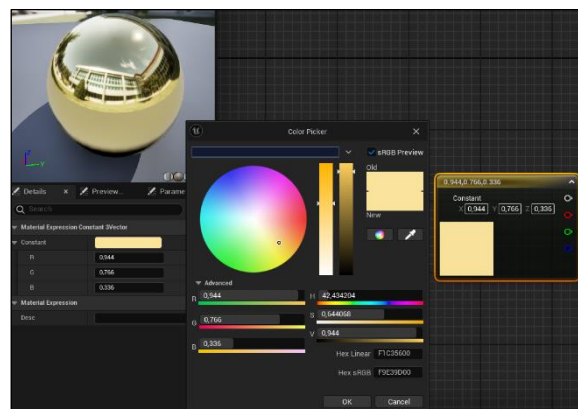
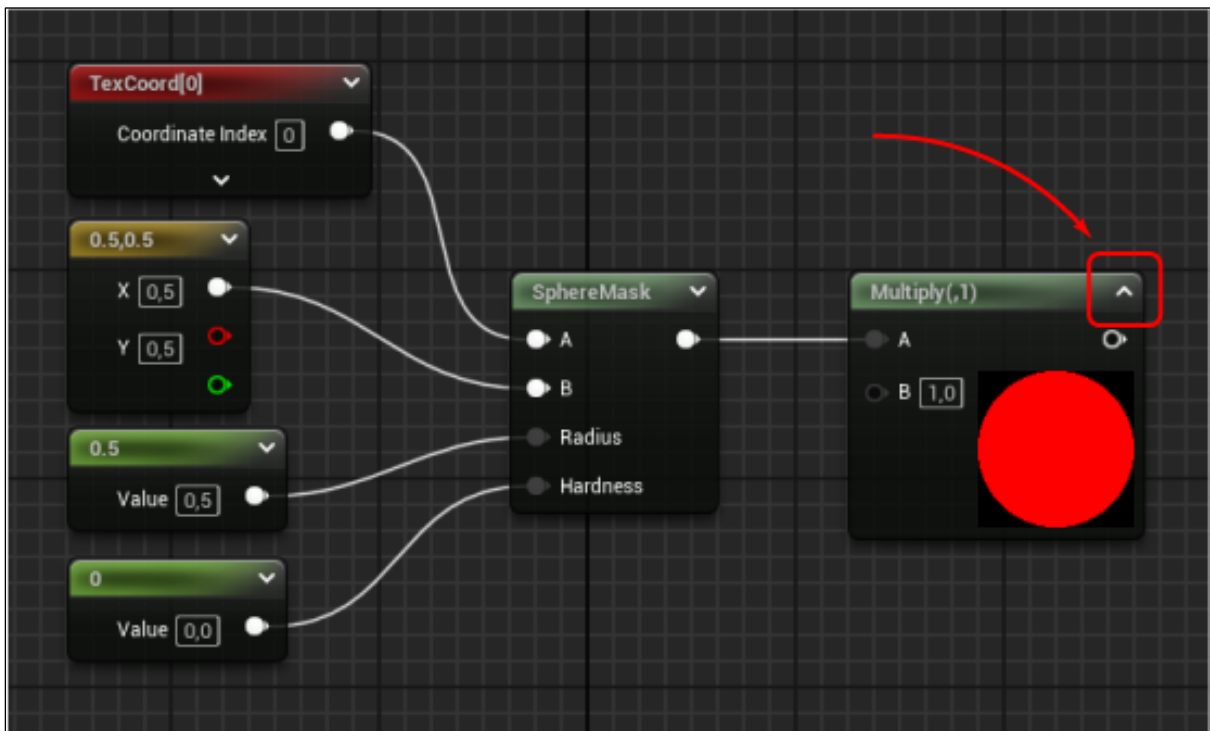
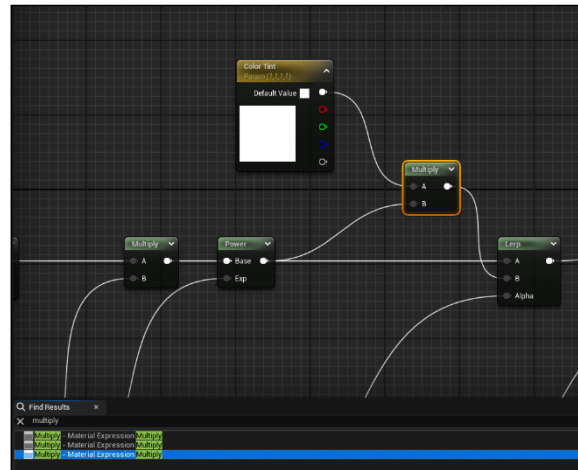


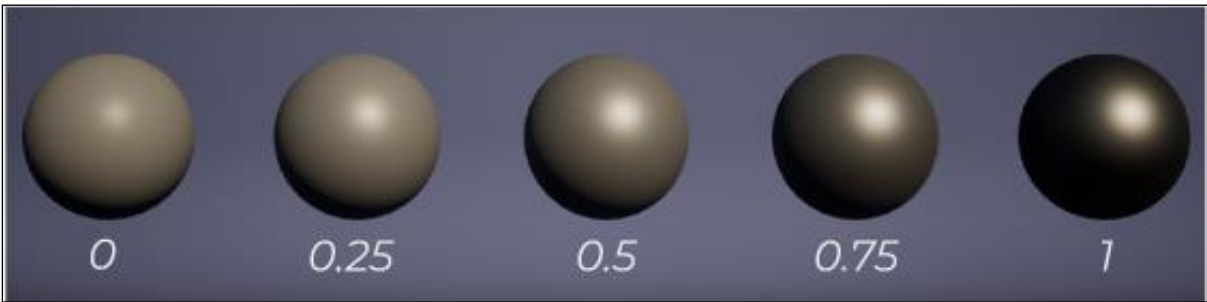
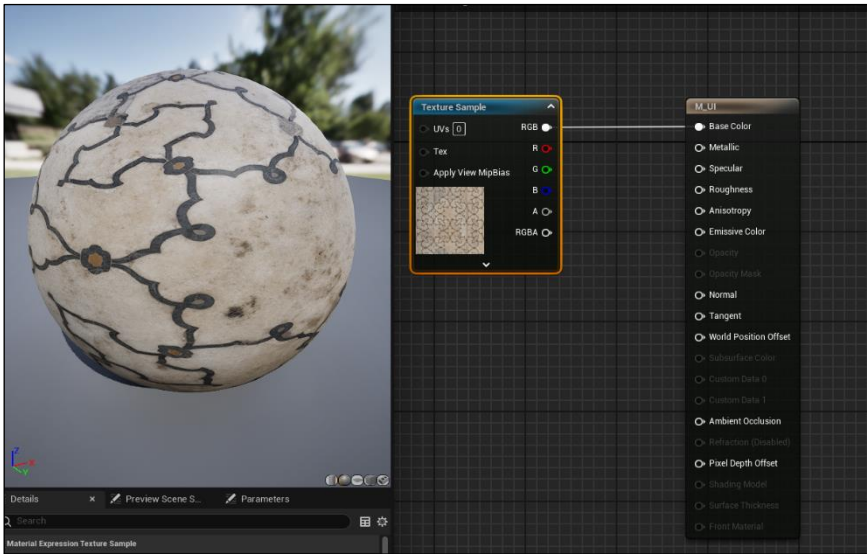
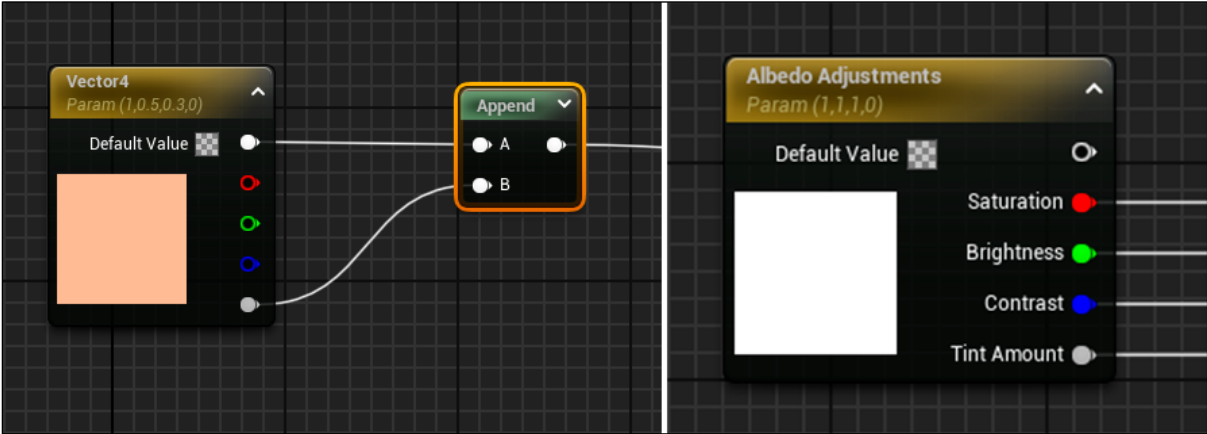
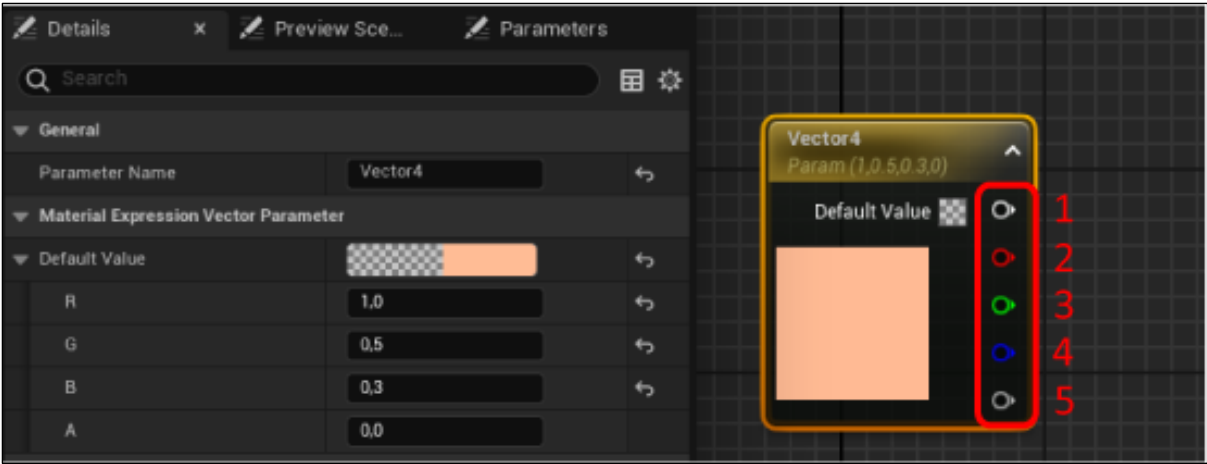


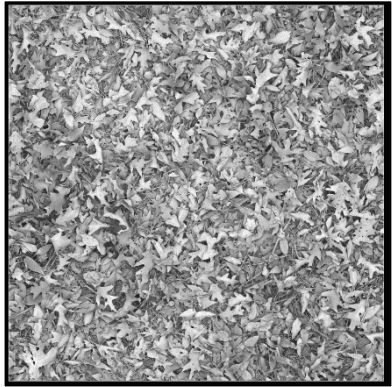
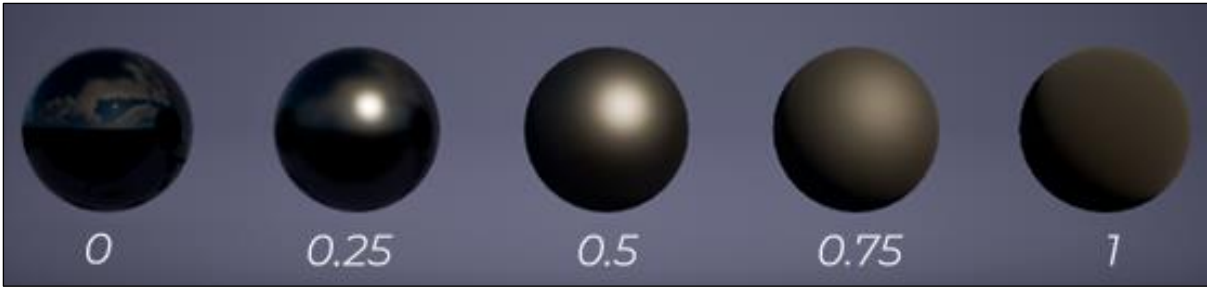


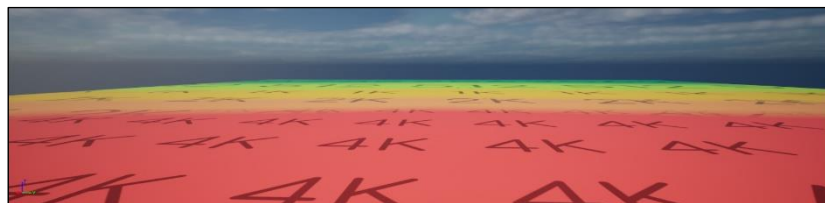
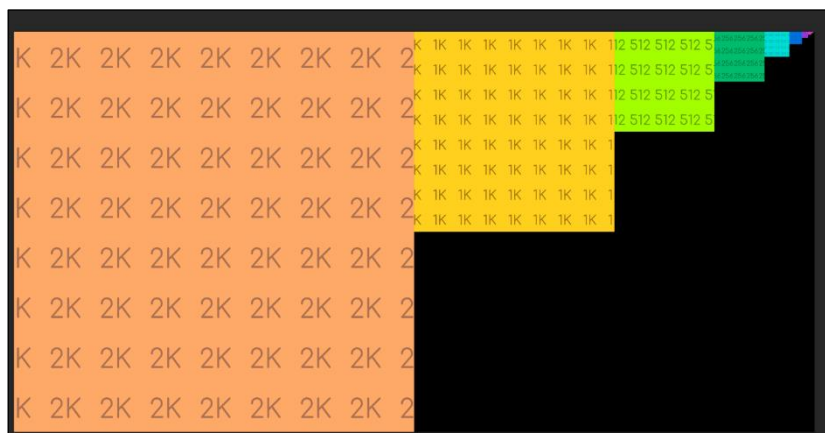
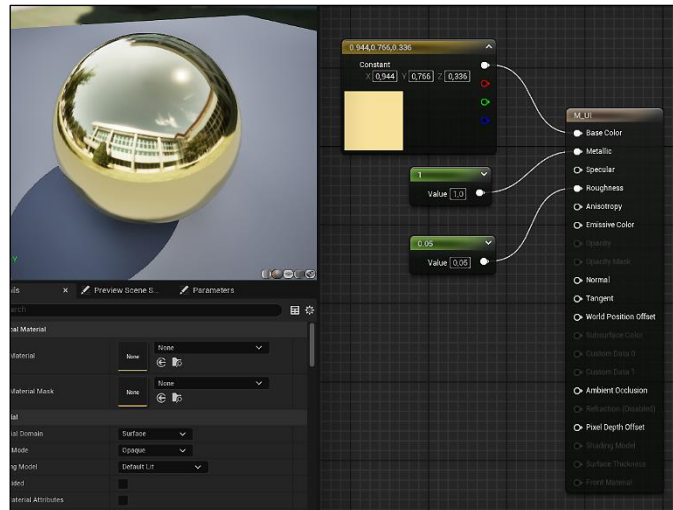


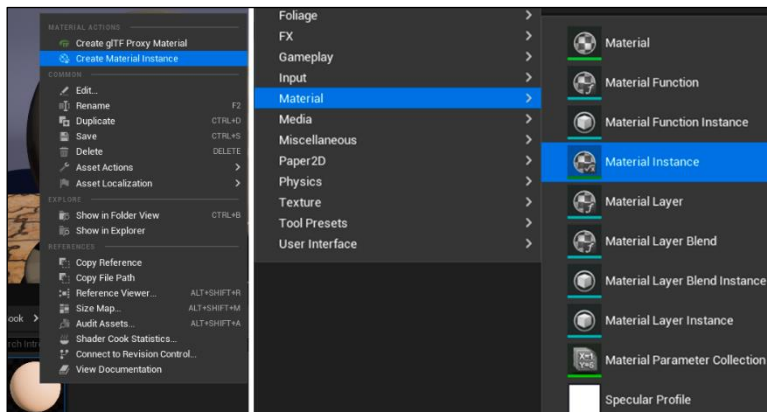
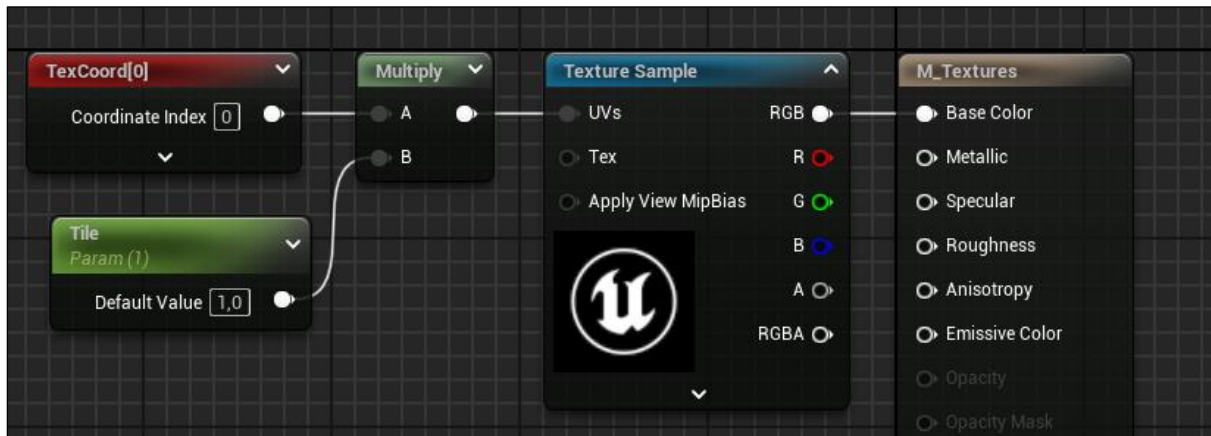
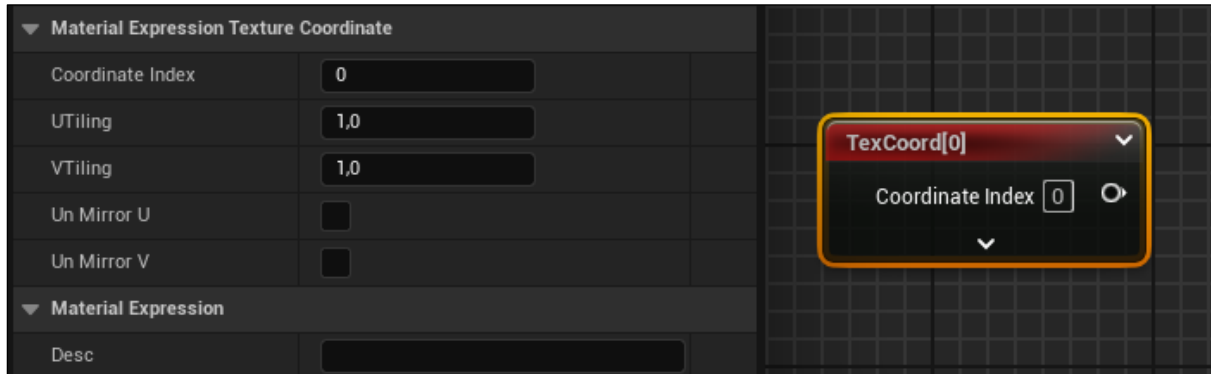
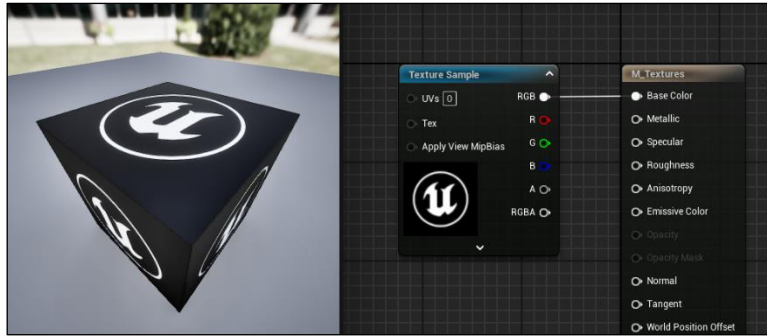
12 3 4 5 6 7 8 9 10 11 12

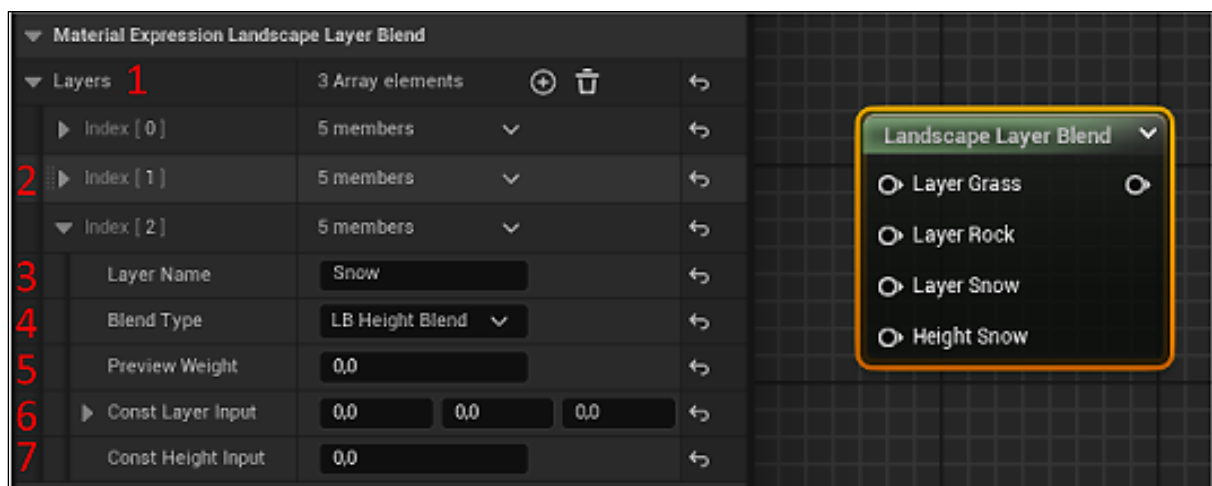
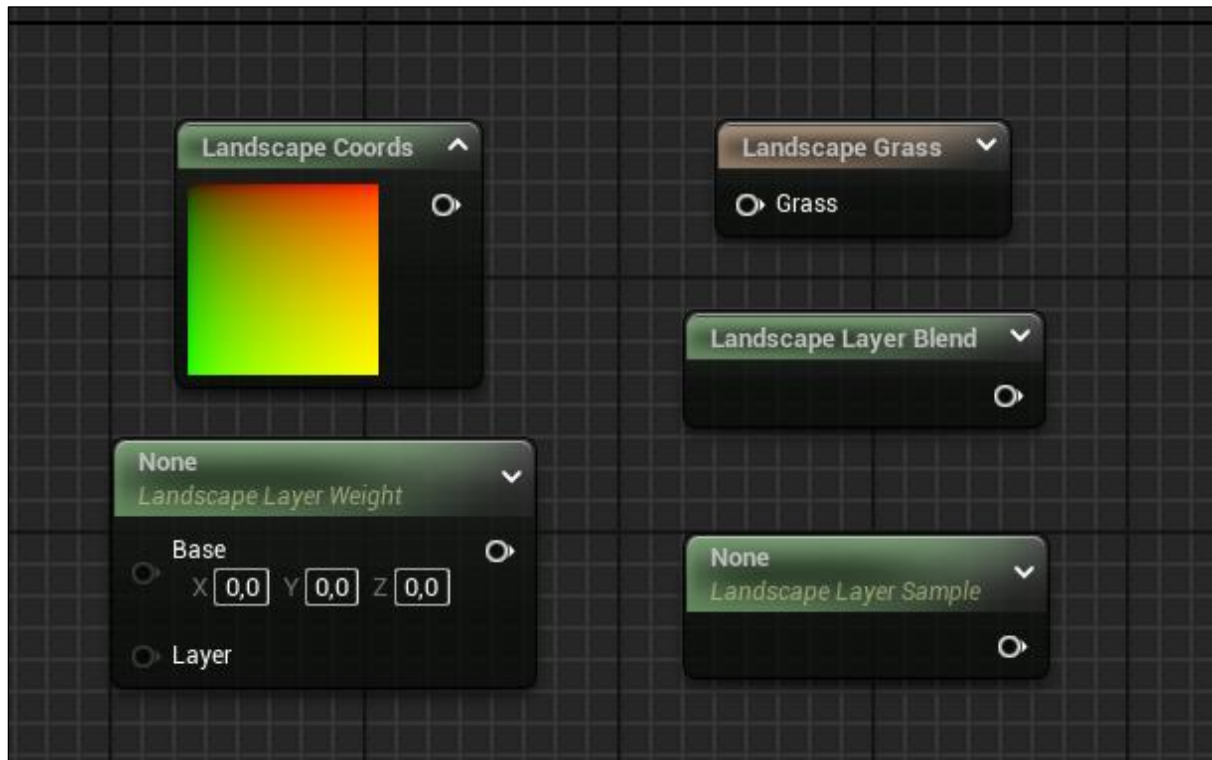
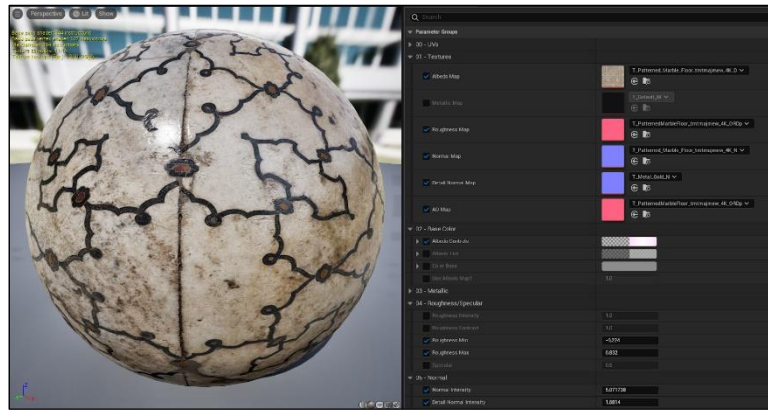


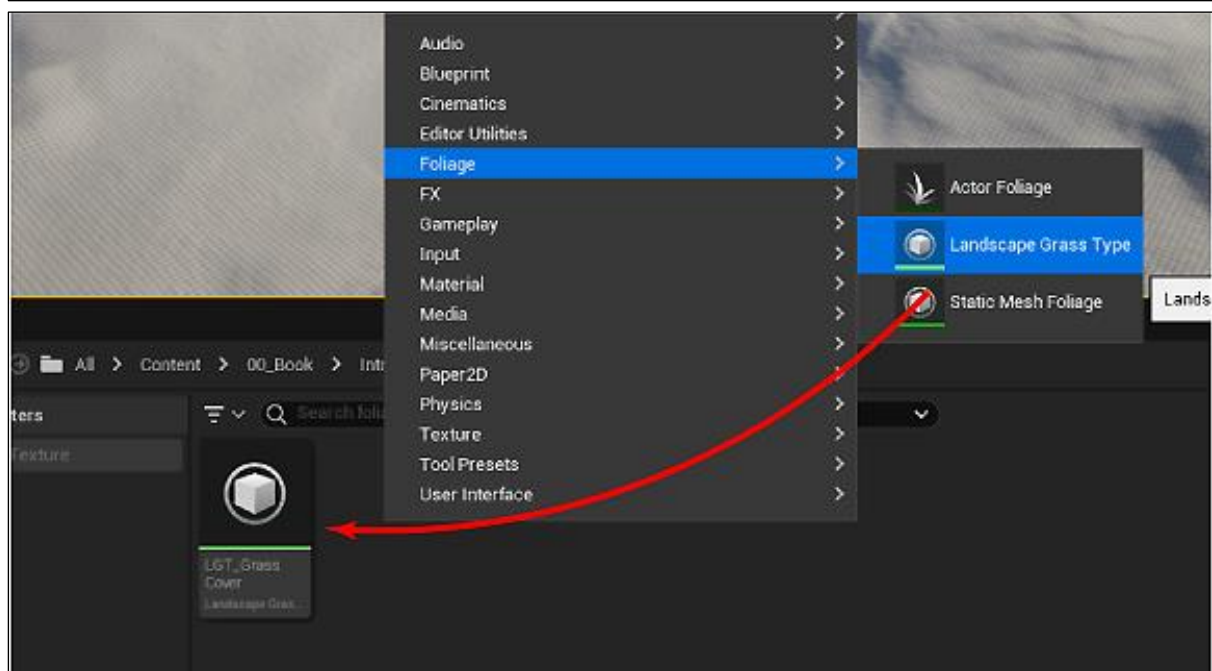
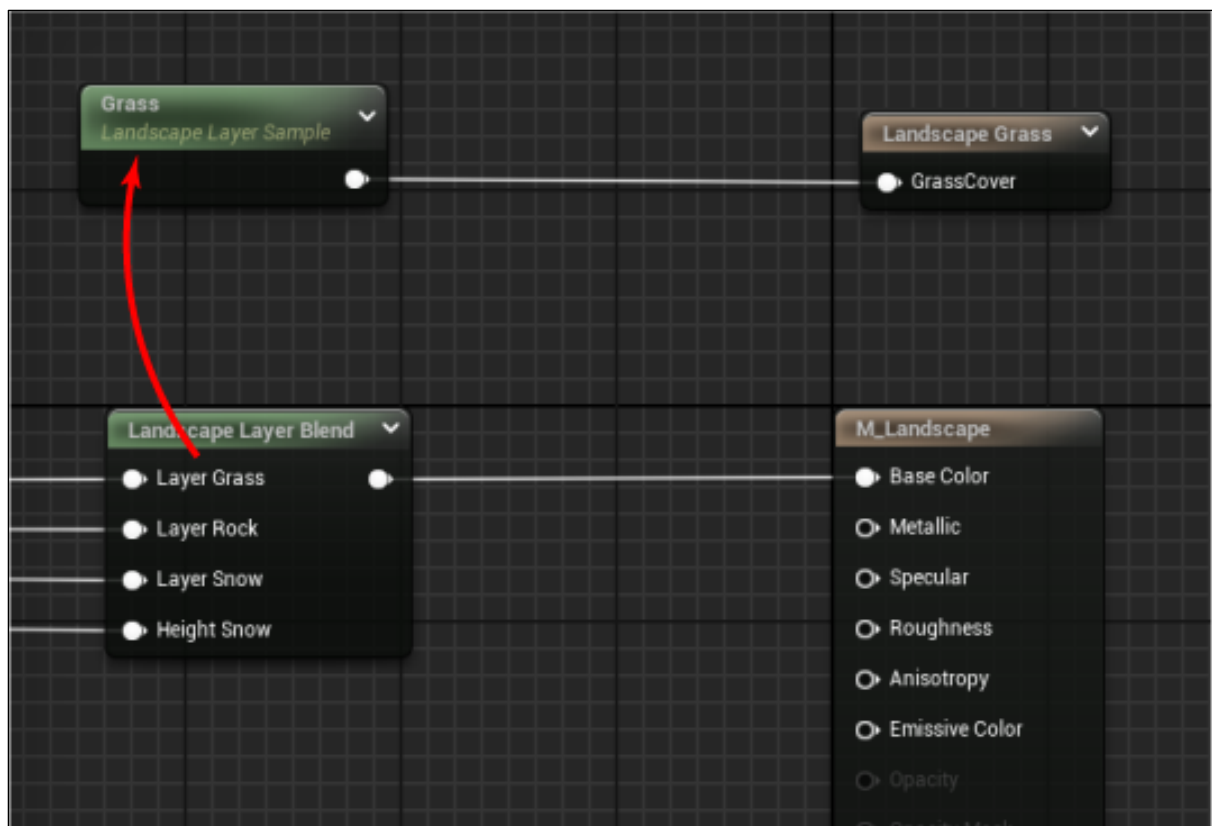


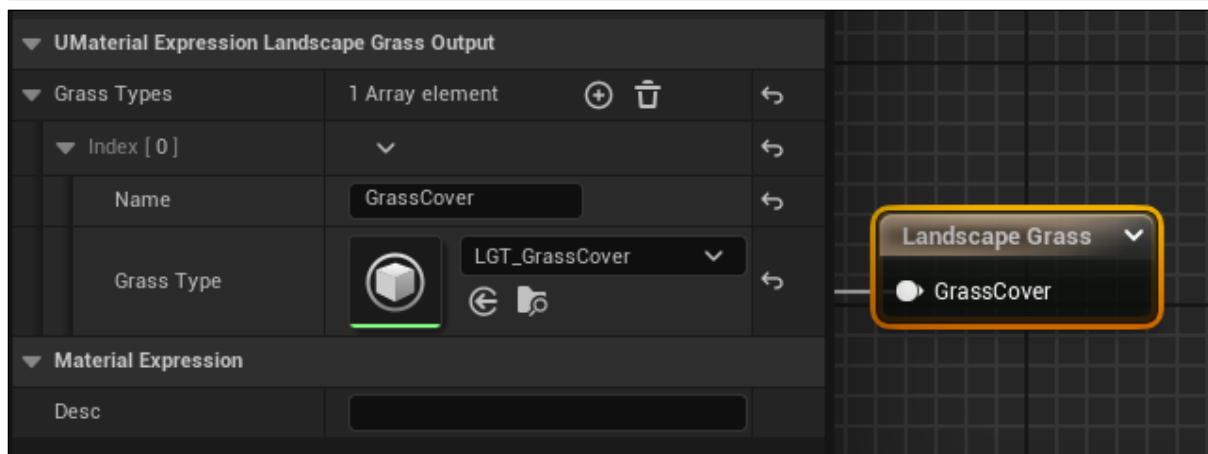
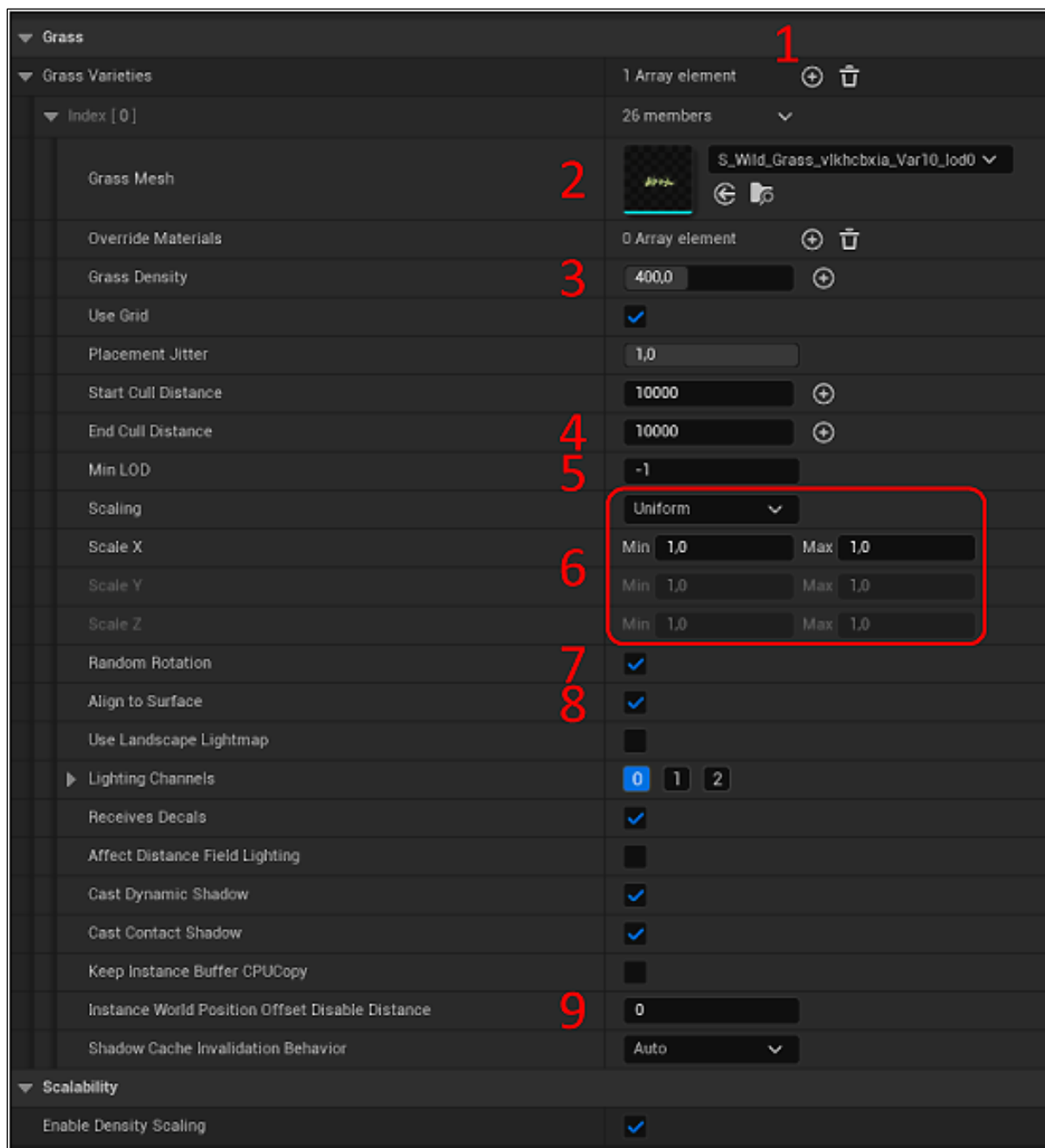


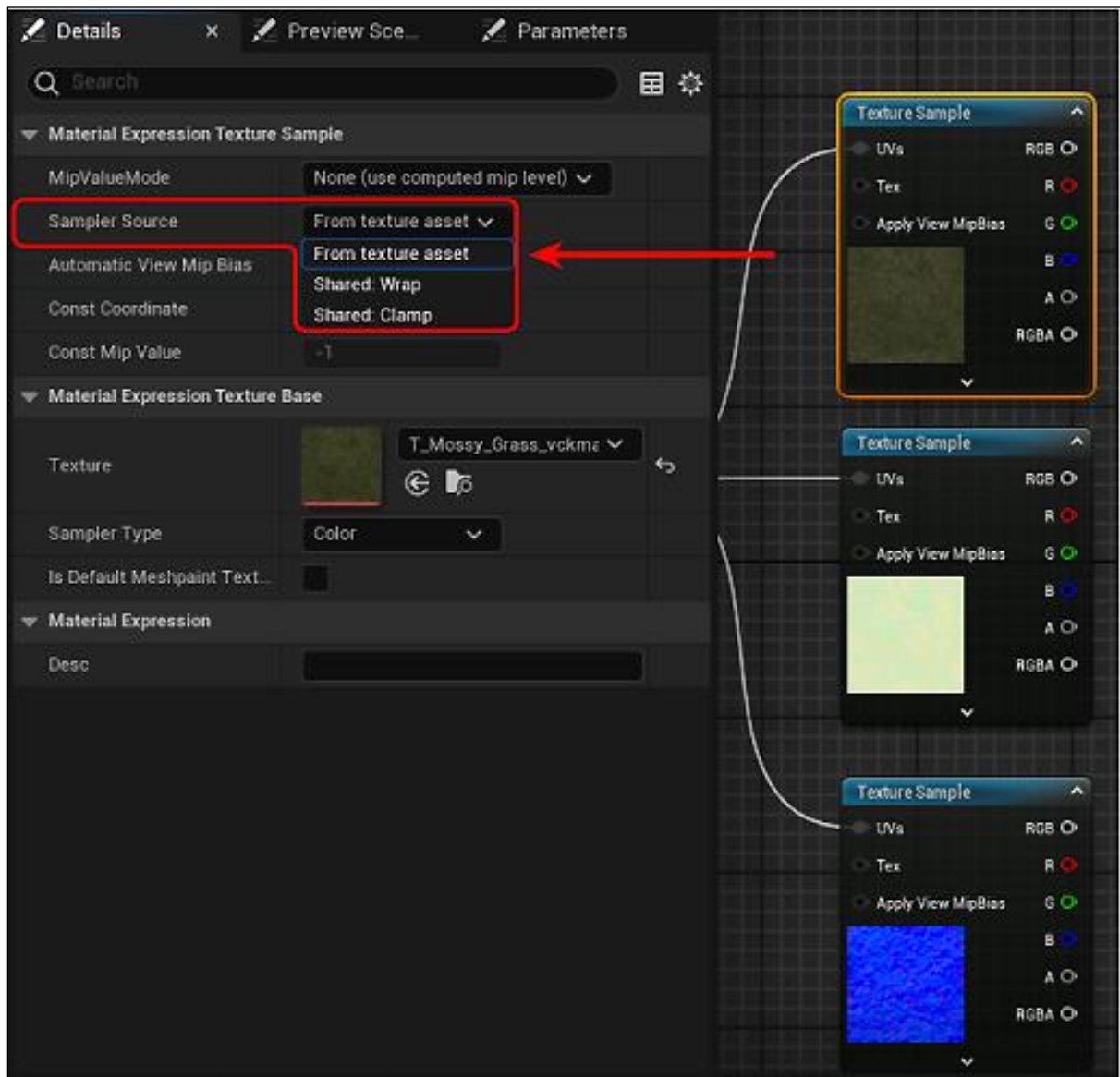
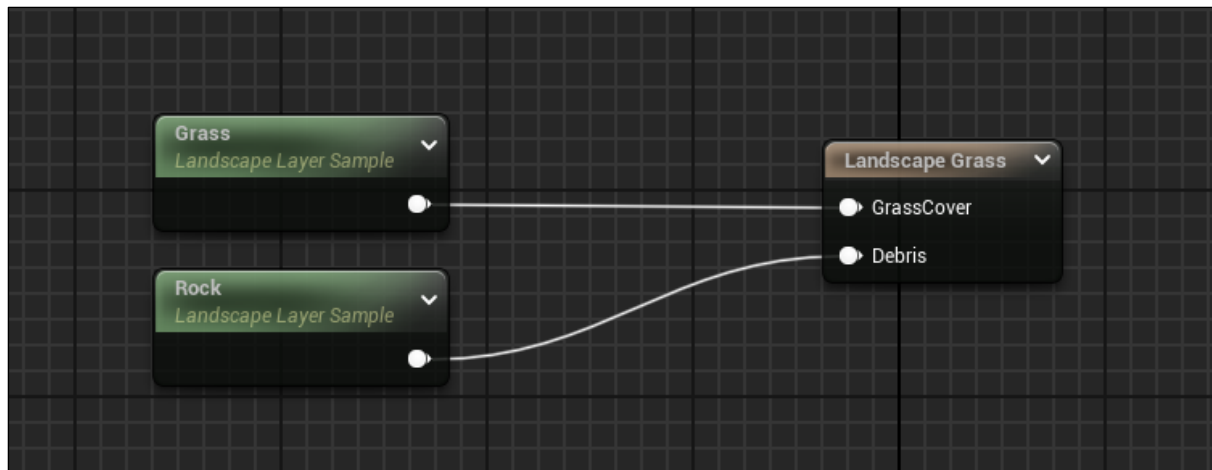


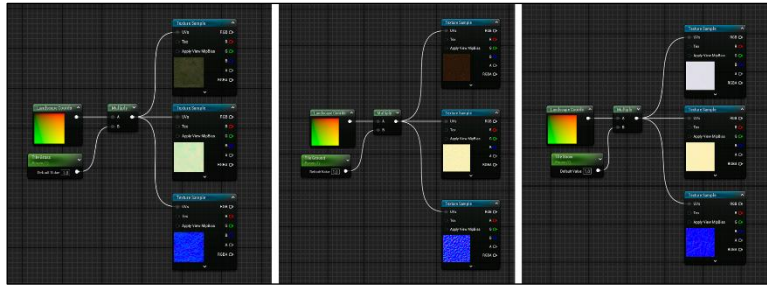












Details x Preview Sce... Parameters

Search

▼ Material Attributes

▼ Attribute Set Types 5 Array elements + - ↶ ↷

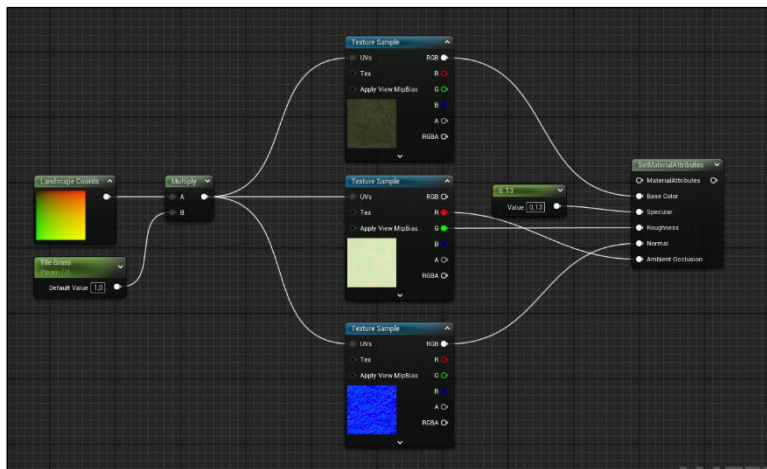
Index	Attribute	Value	Reset
Index [0]	BaseColor		↶
Index [1]	Specular		↶
Index [2]	Roughness		↶
Index [3]	Normal		↶
Index [4]	AmbientOcclusion		↶

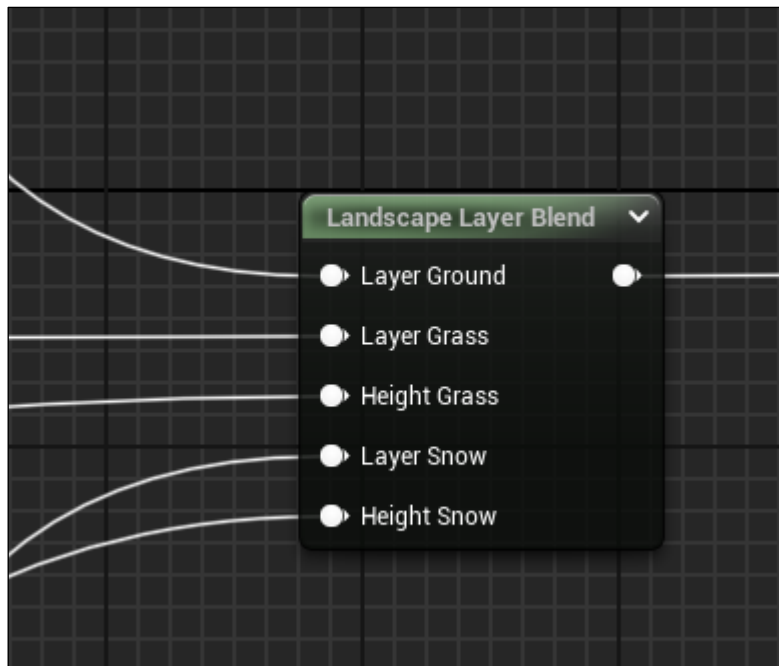
▼ Material Expression

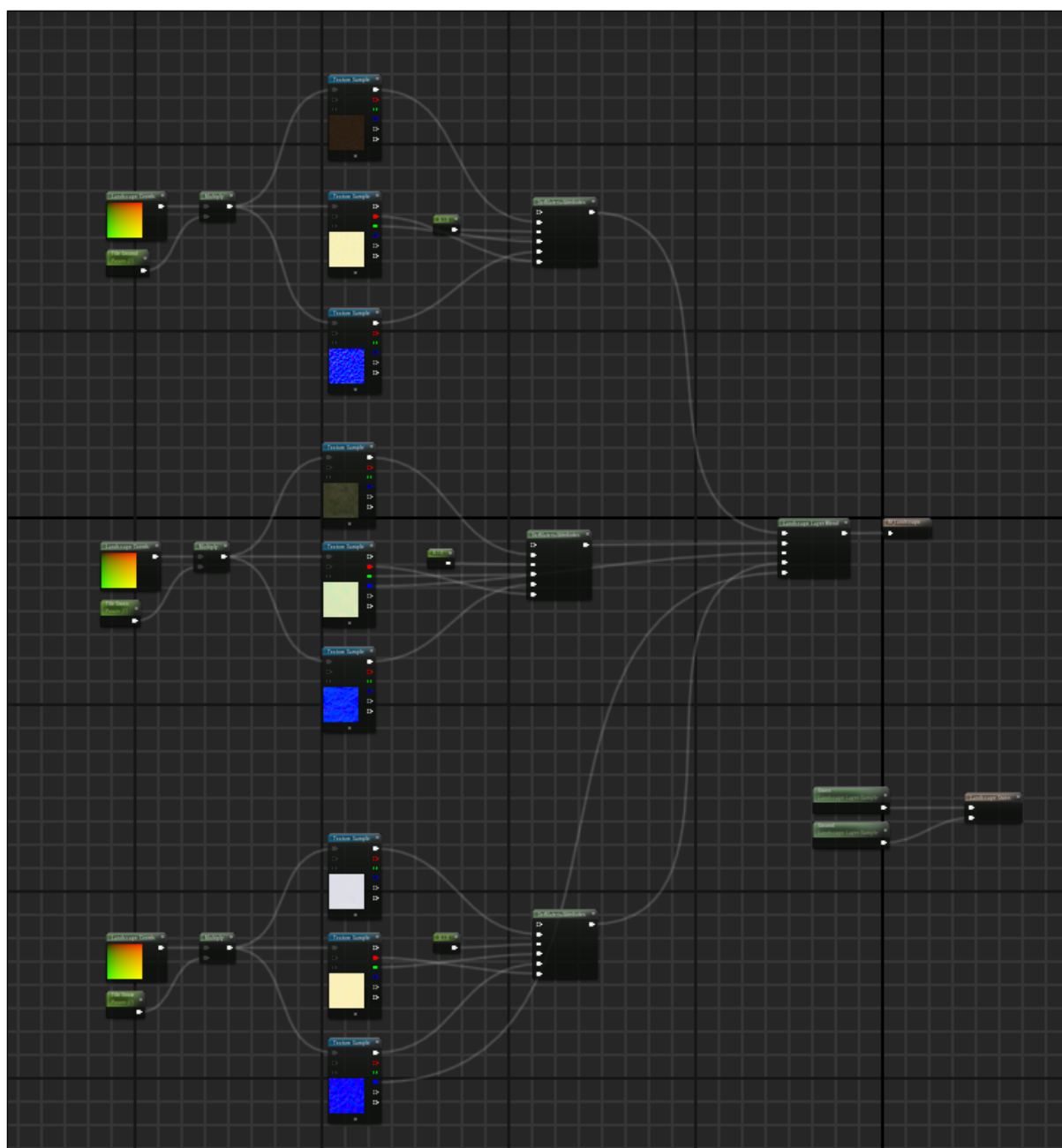
Desc

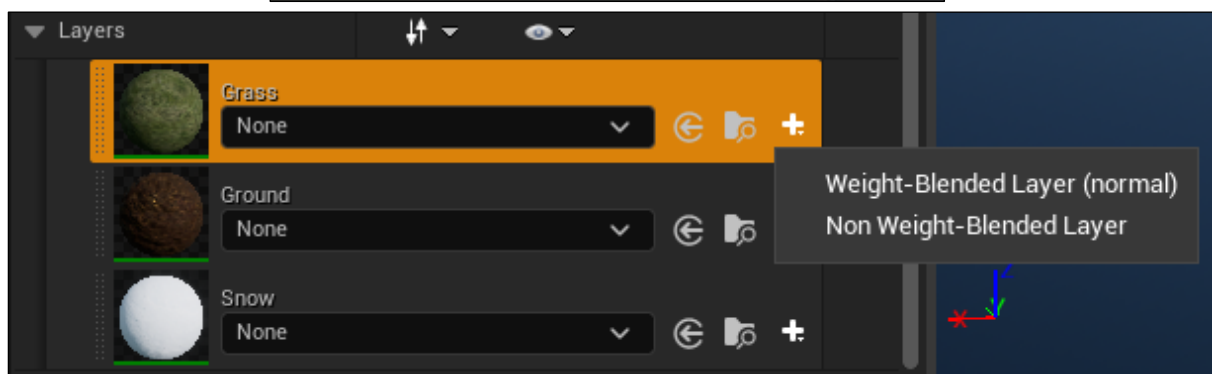
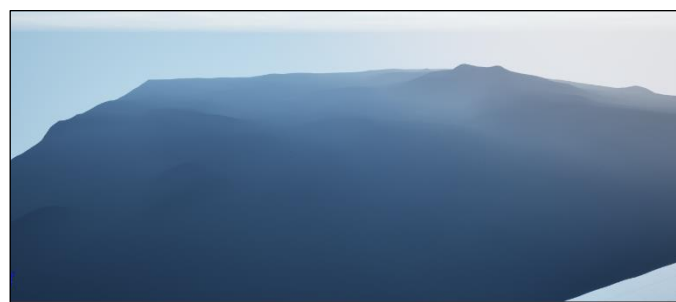
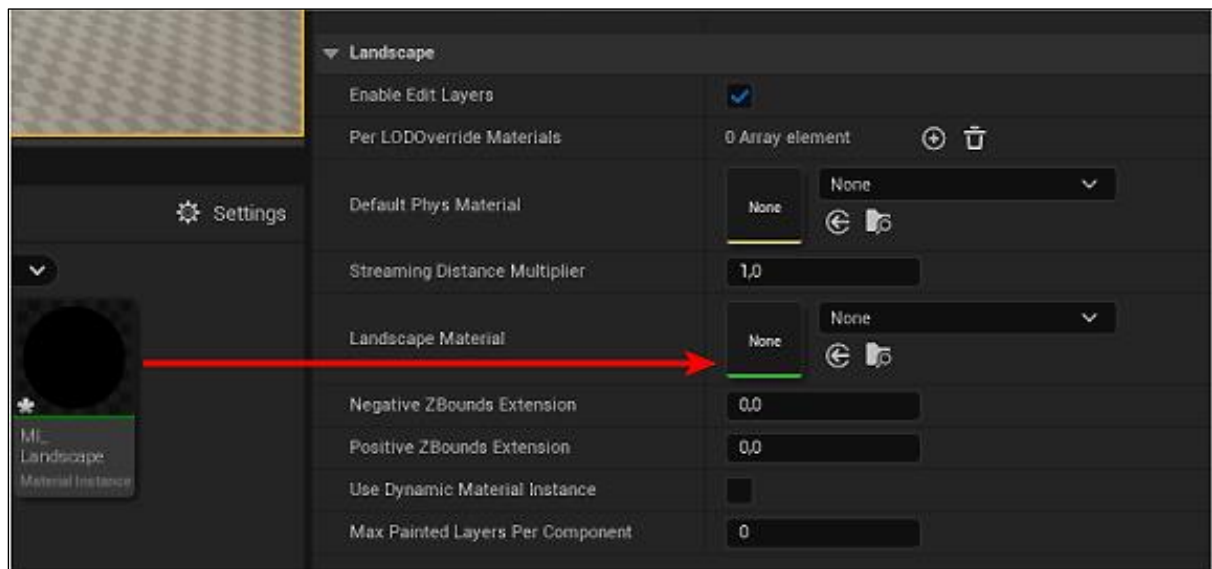
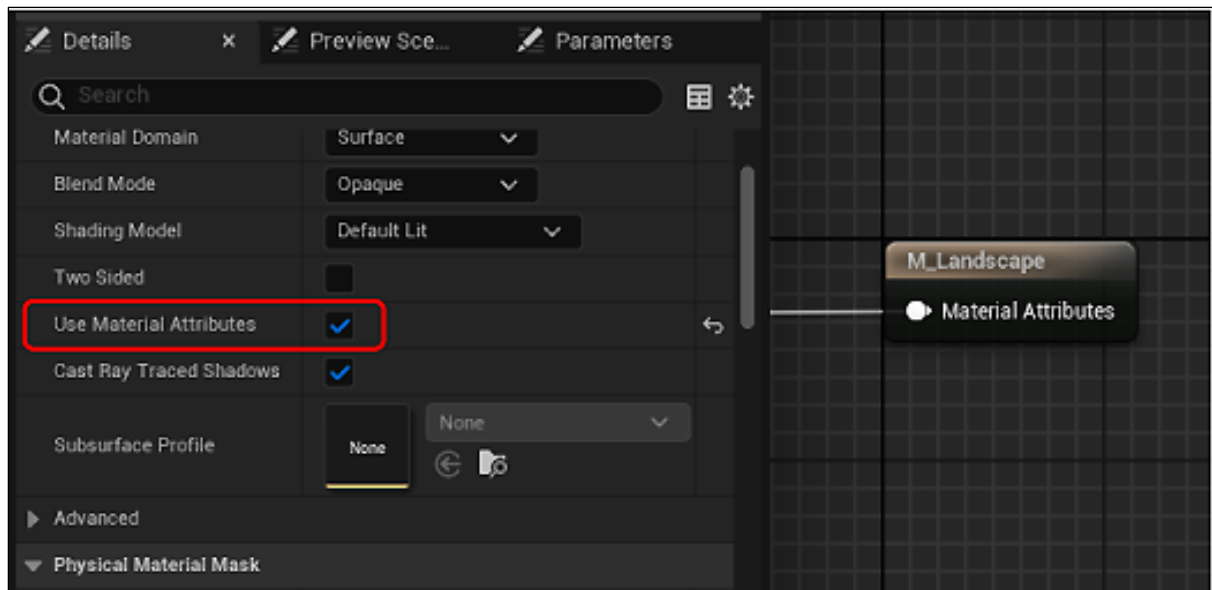
SetMaterialAttributes ▼

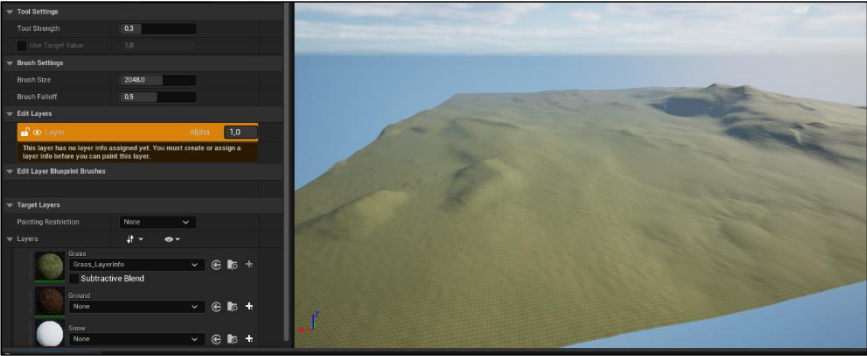
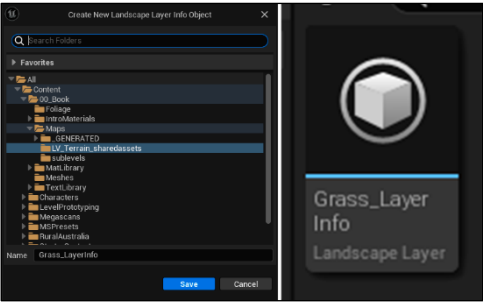
- MaterialAttributes
- Base Color
- Specular
- Roughness
- Normal
- Ambient Occlusion



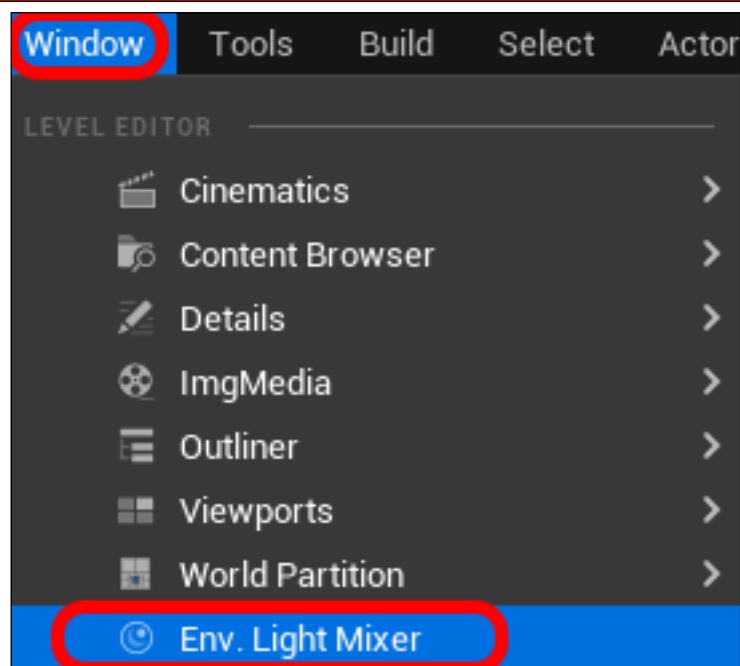
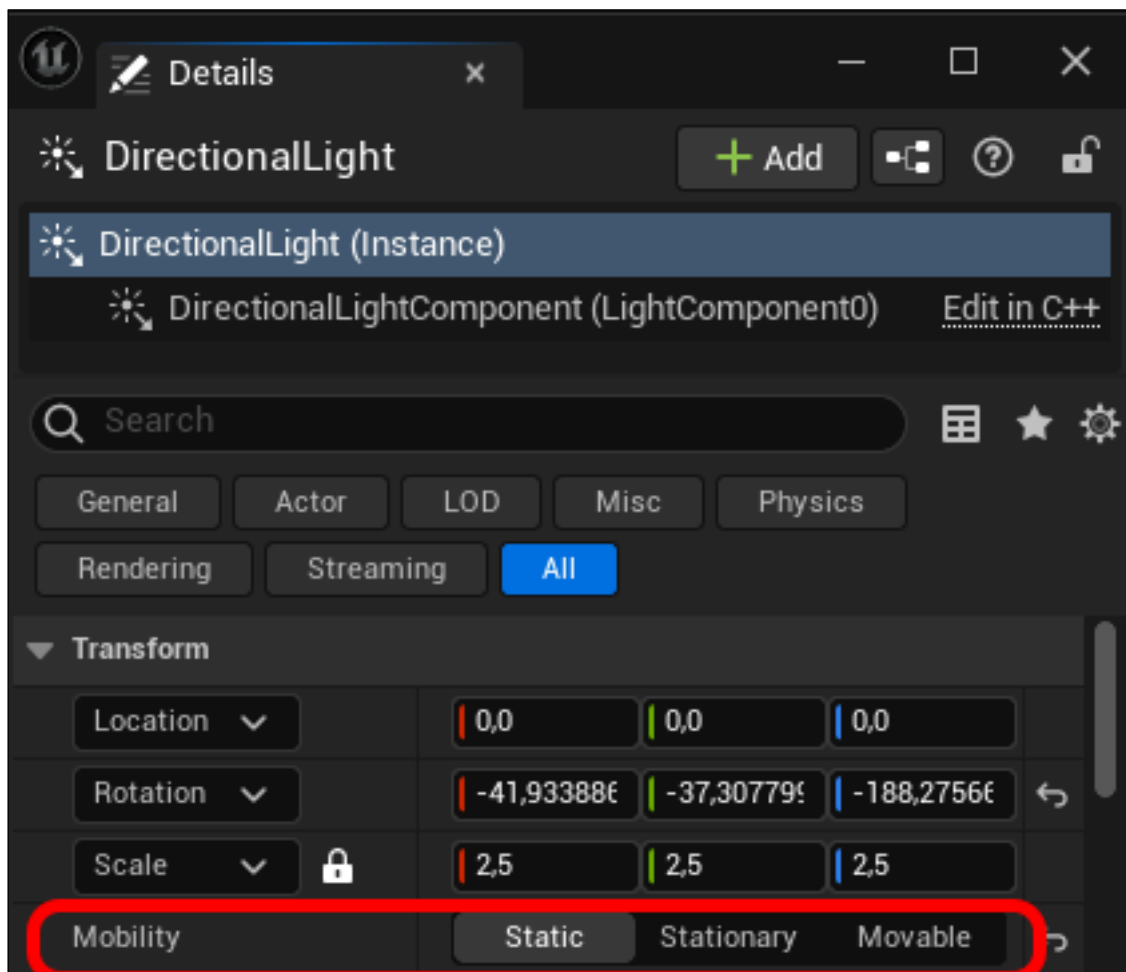


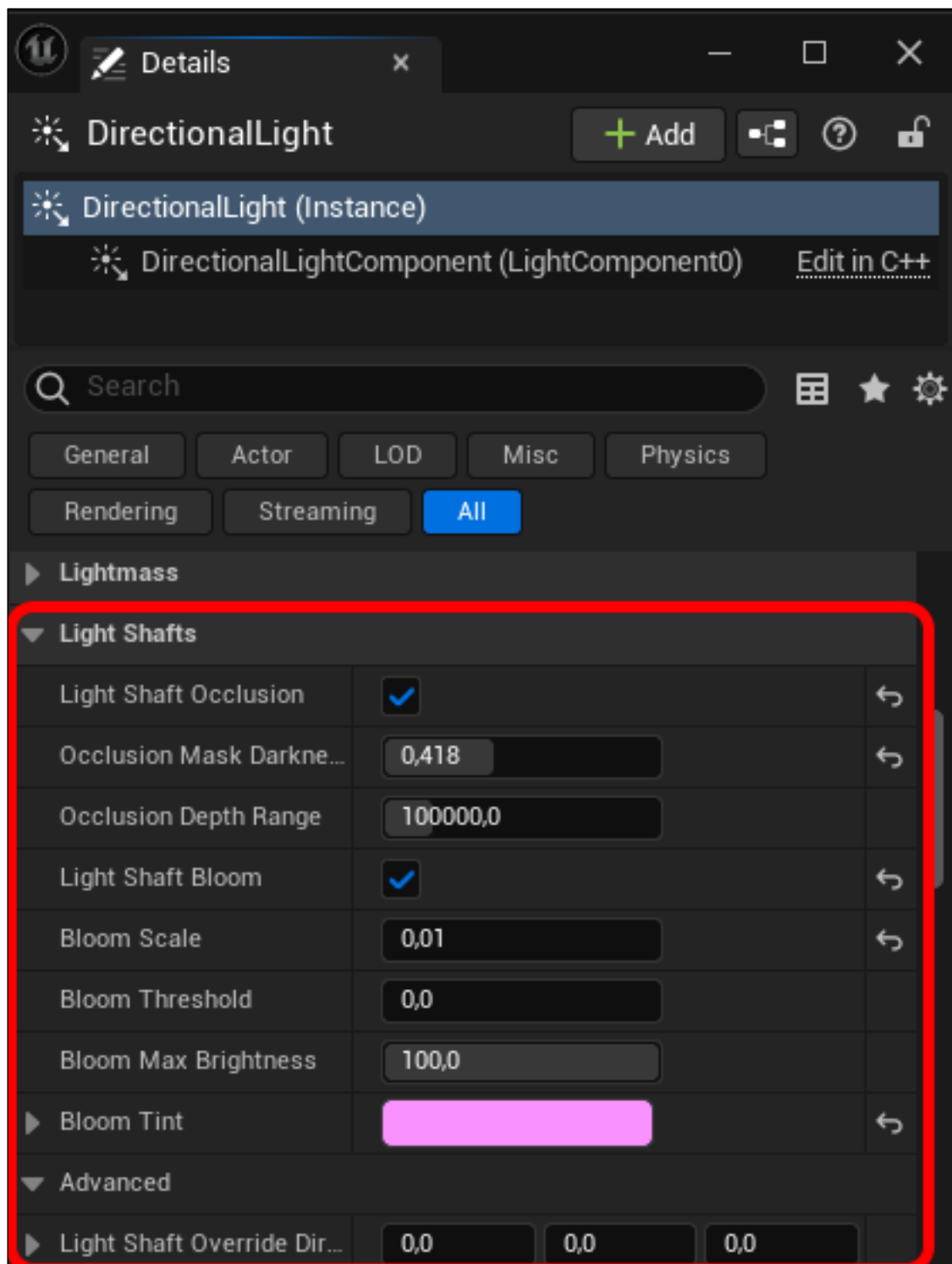


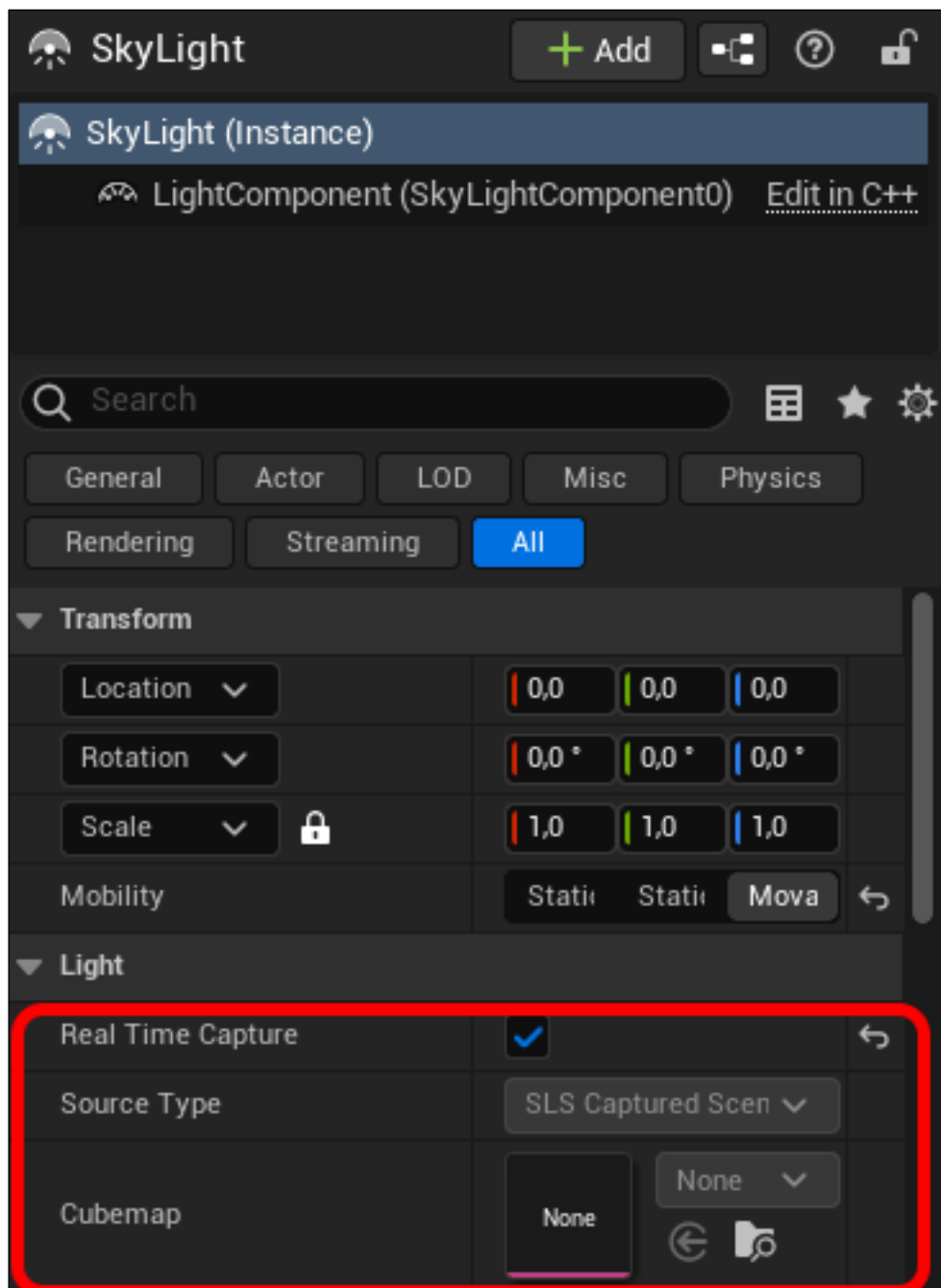


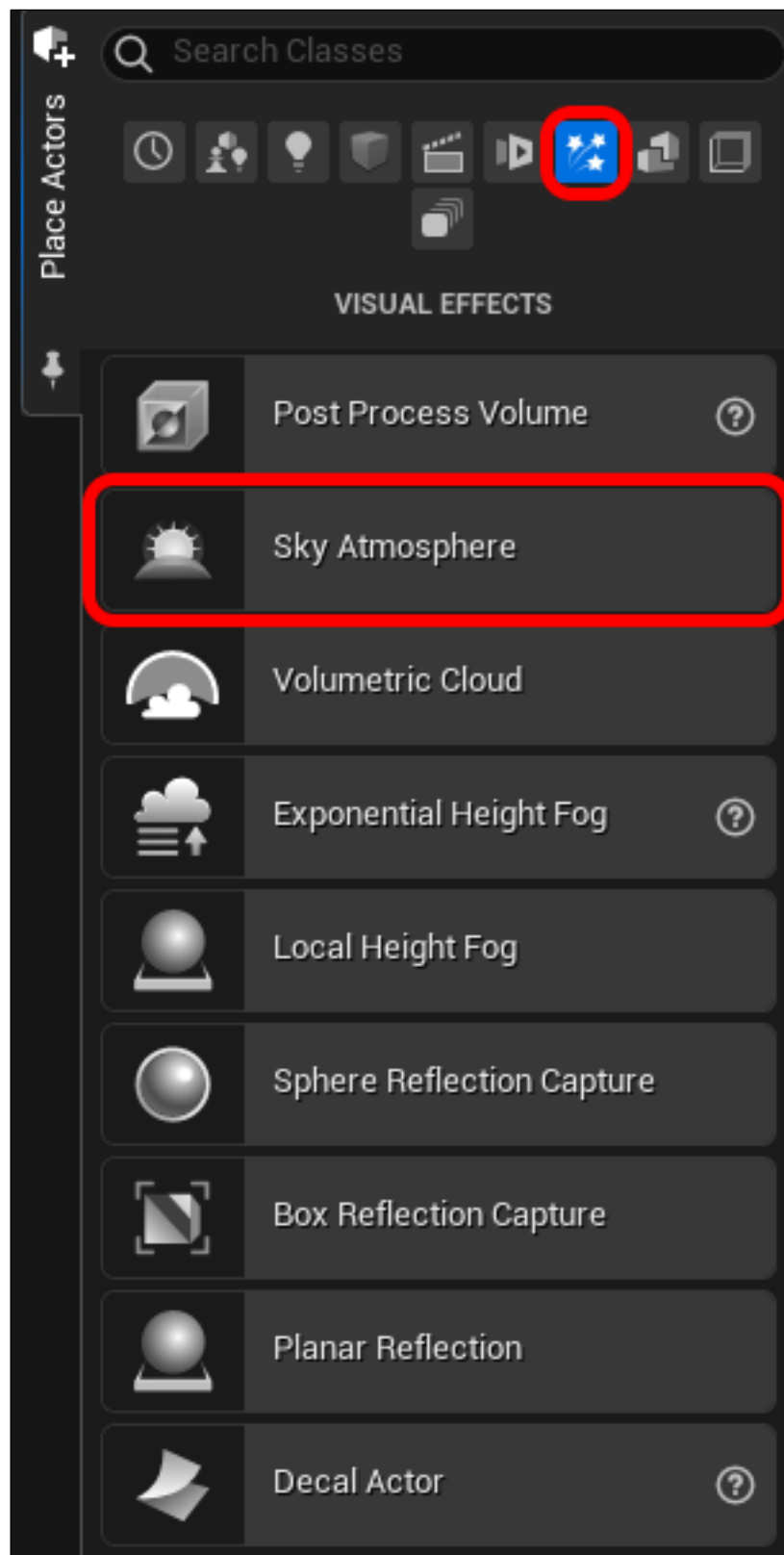


Chapter 9: Create Your World's Atmospheric Lighting









 Details ✕

 SkyAtmosphere

 SkyAtmosphere (Instance)

 SkyAtmosphereComponent (SkyAtmosphereComponent)

 Search

General

Actor

LOD

Misc

Physics

Rendering

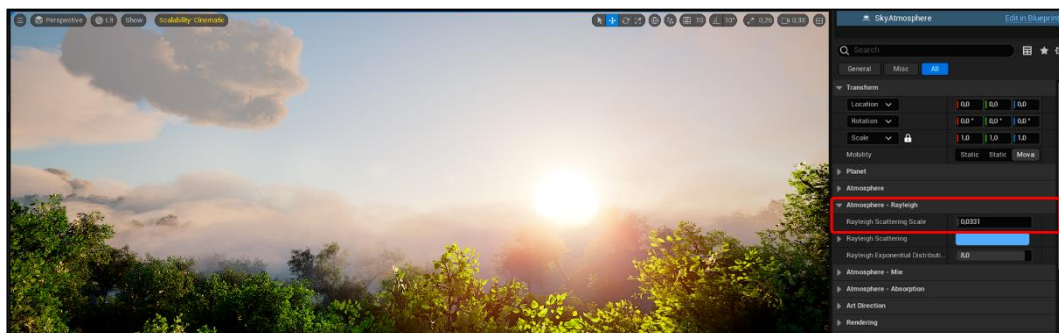
▶ Transform

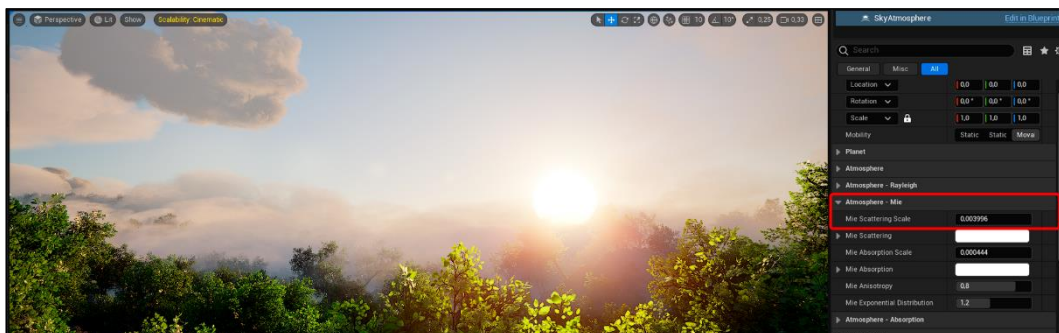
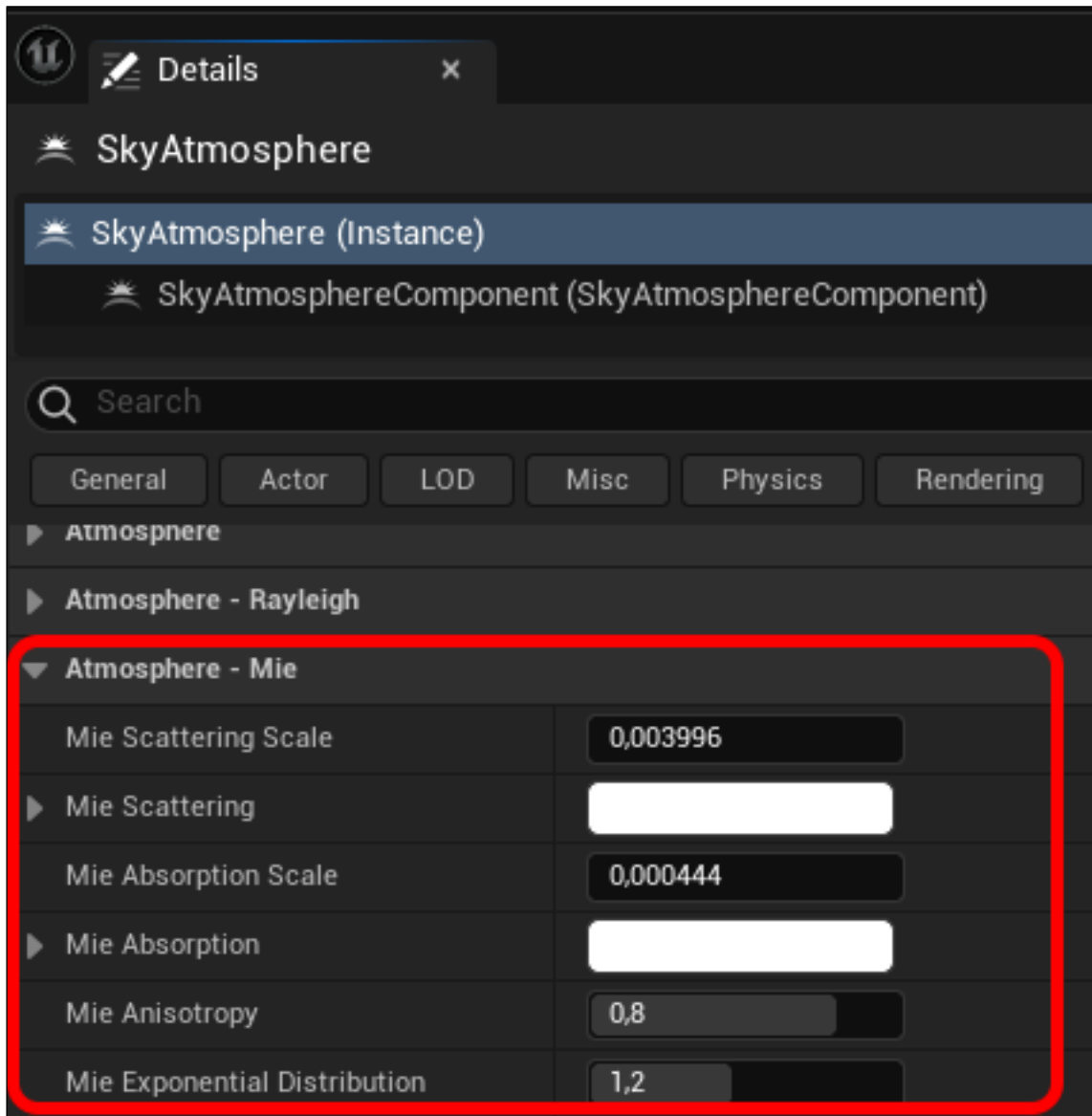
▶ Planet

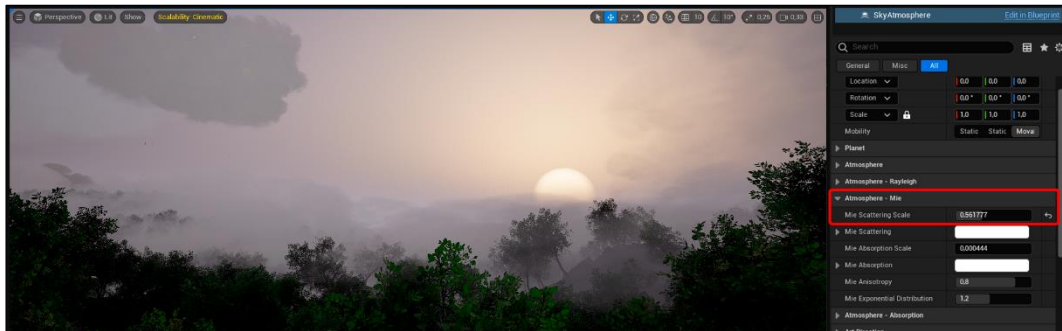
▶ Atmosphere

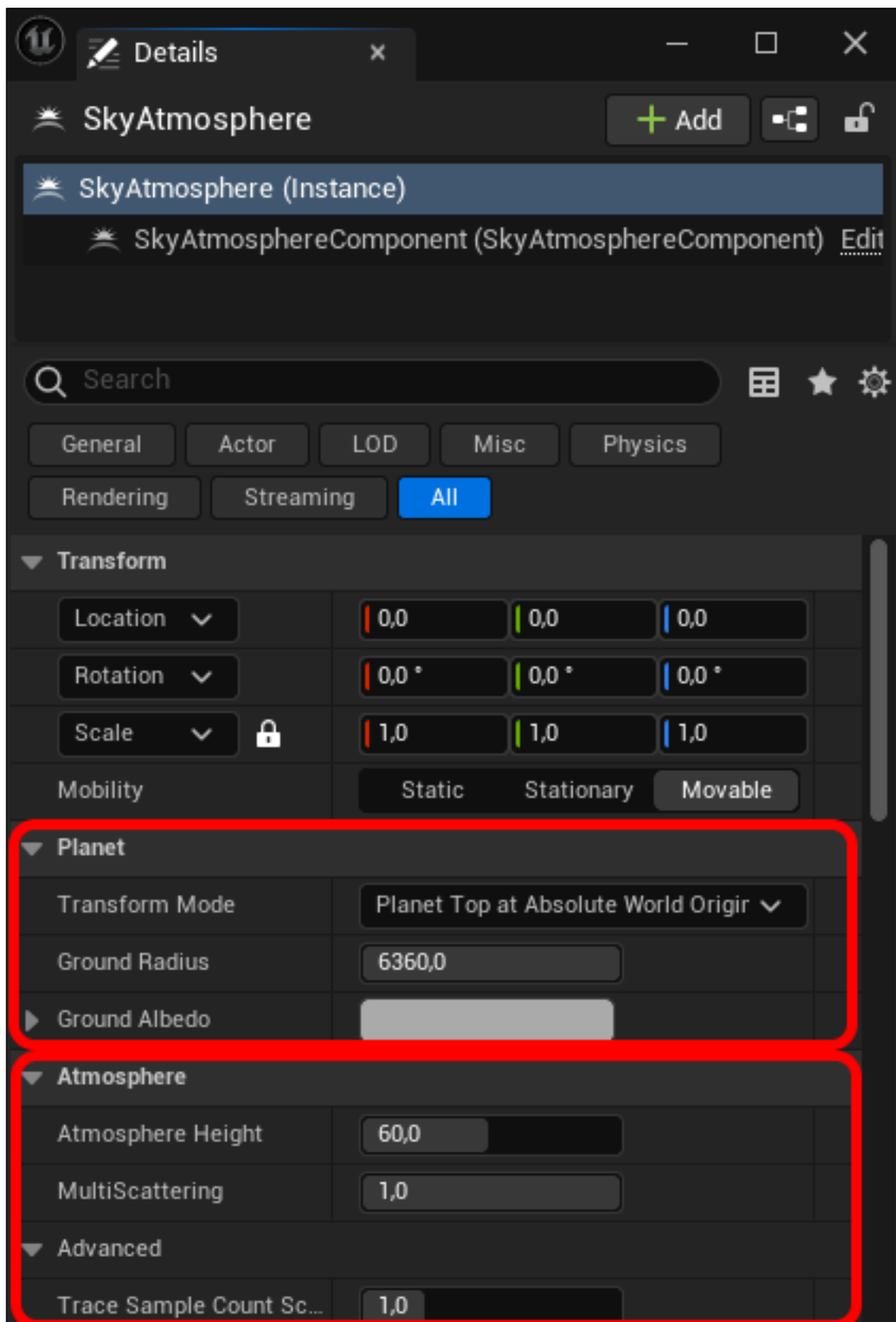
▼ Atmosphere - Rayleigh

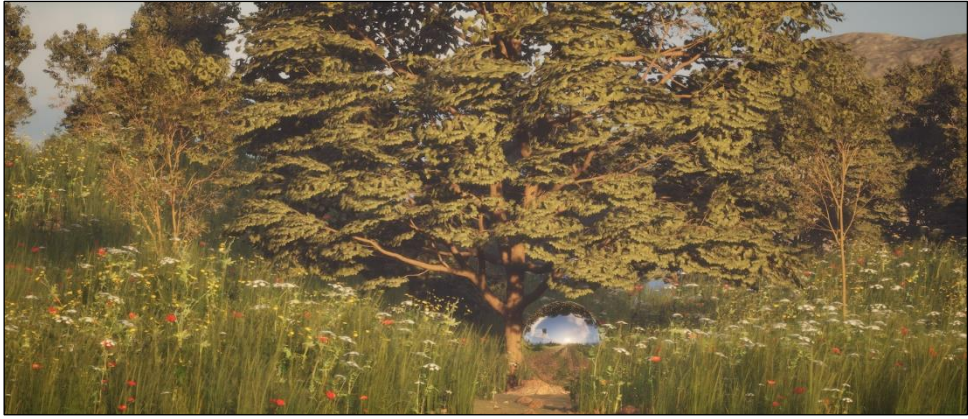
Rayleigh Scattering Scale	0,0331
▼ Rayleigh Scattering	
R	0,175287
G	0,409607
B	1,0
Rayleigh Exponential Distribution	8,0

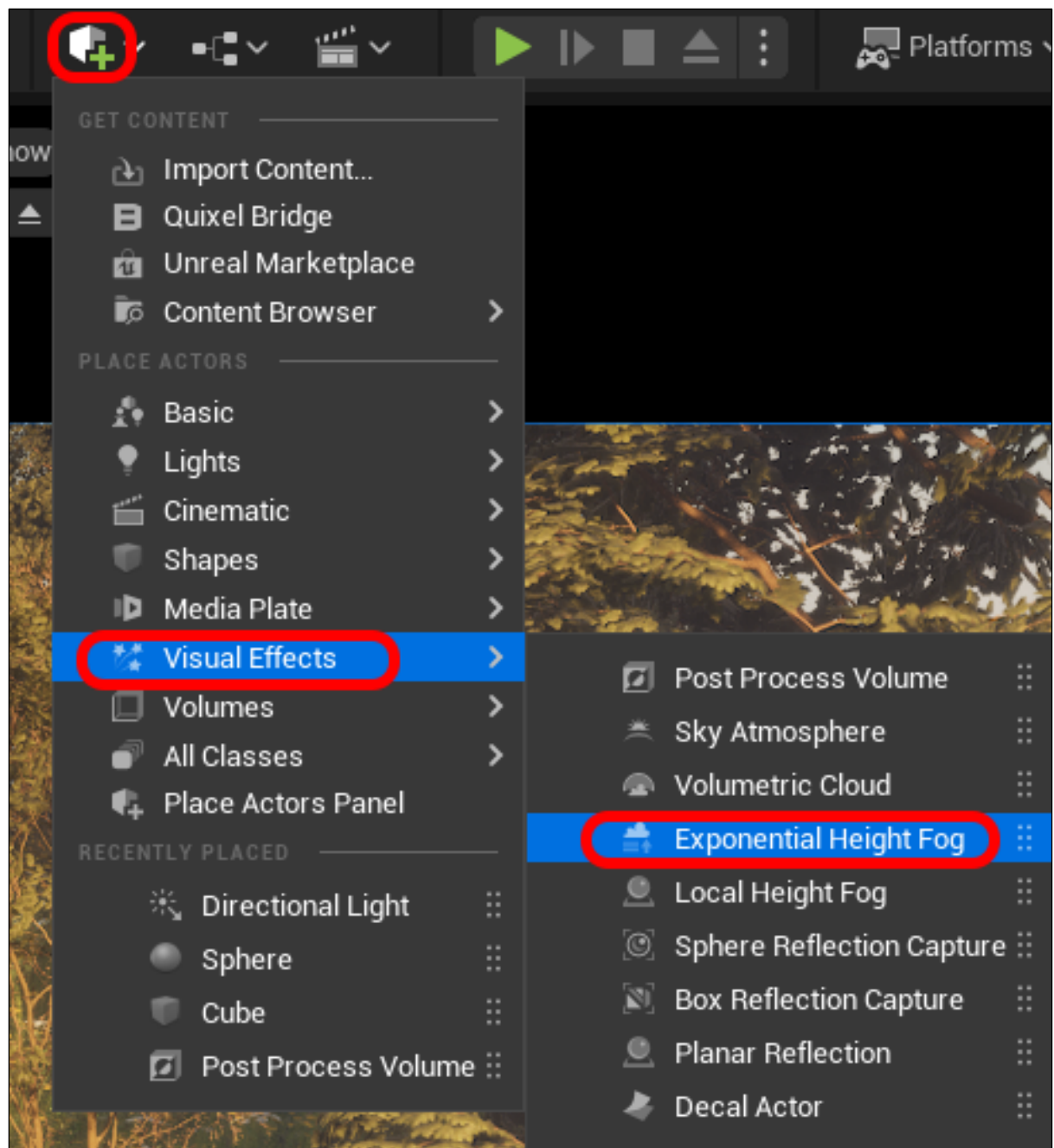


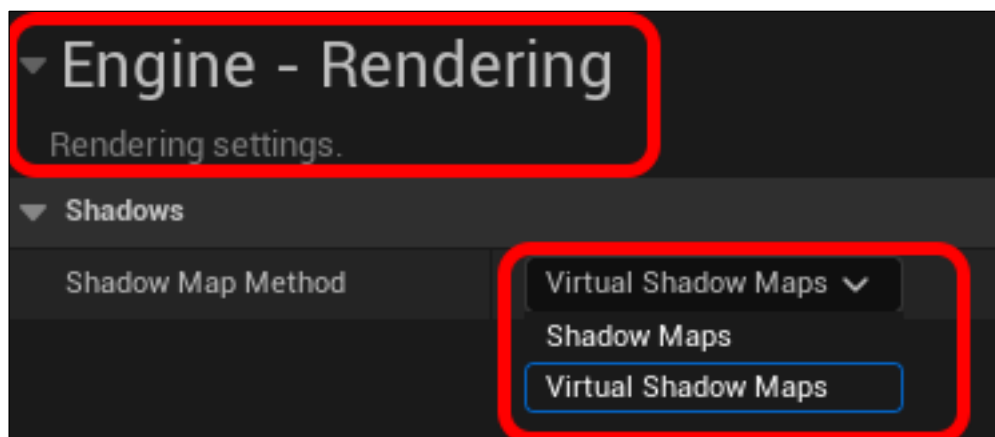
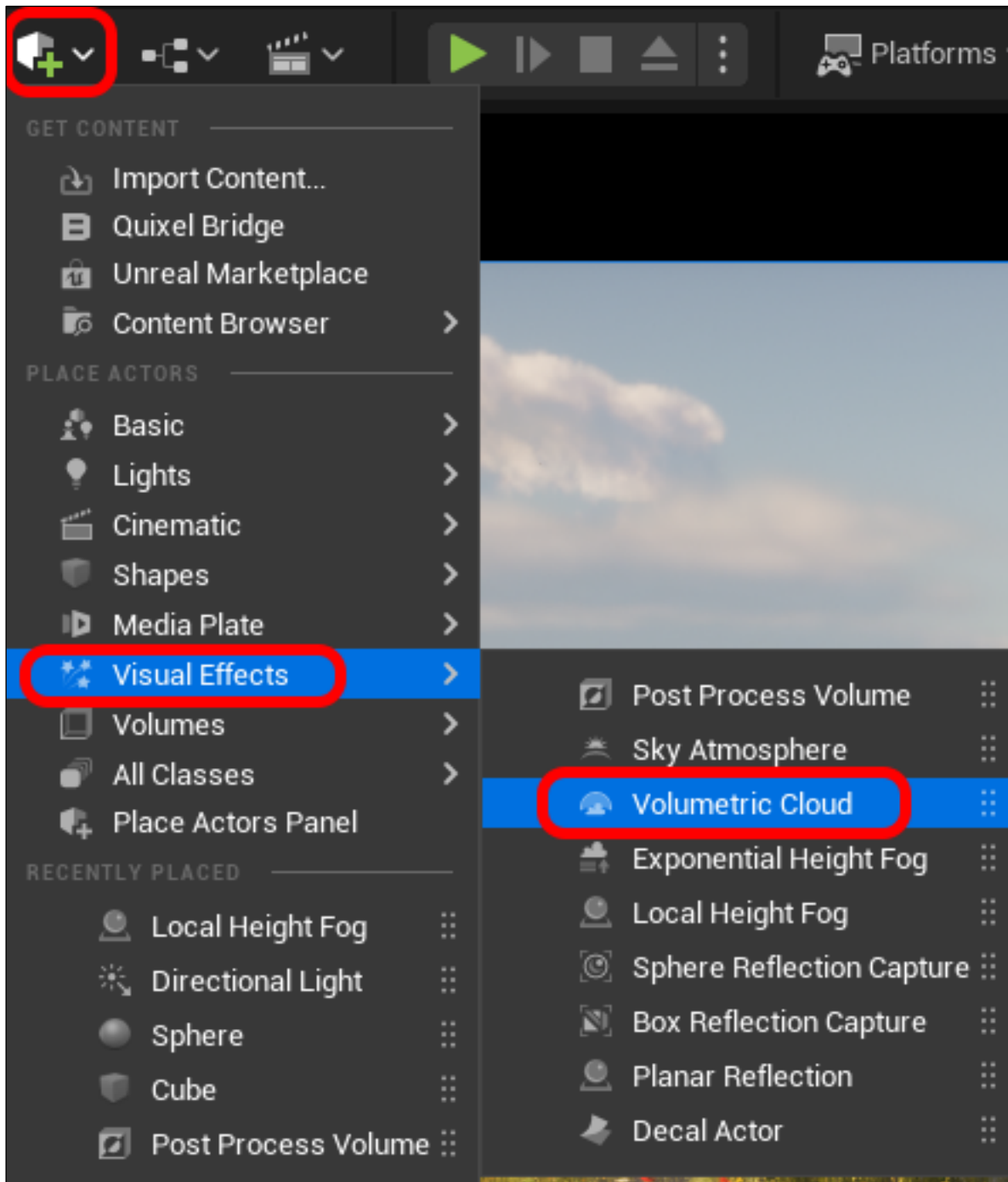








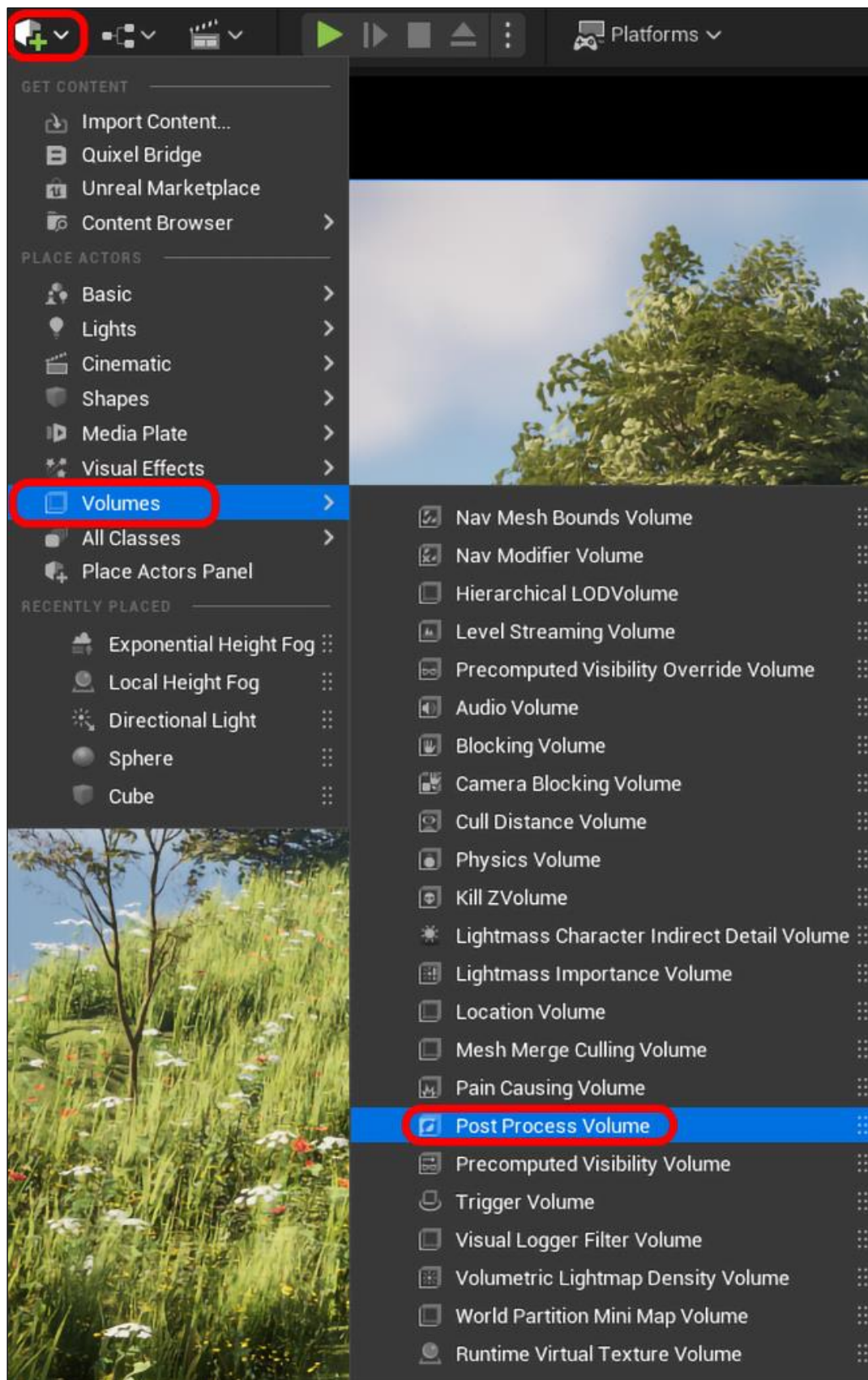


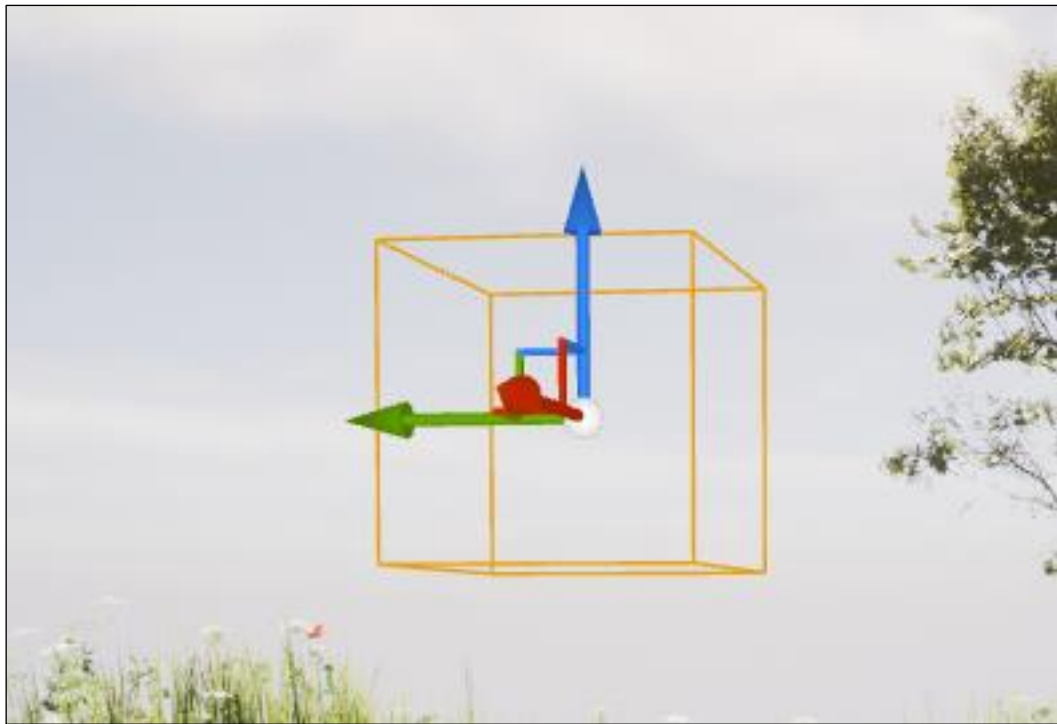


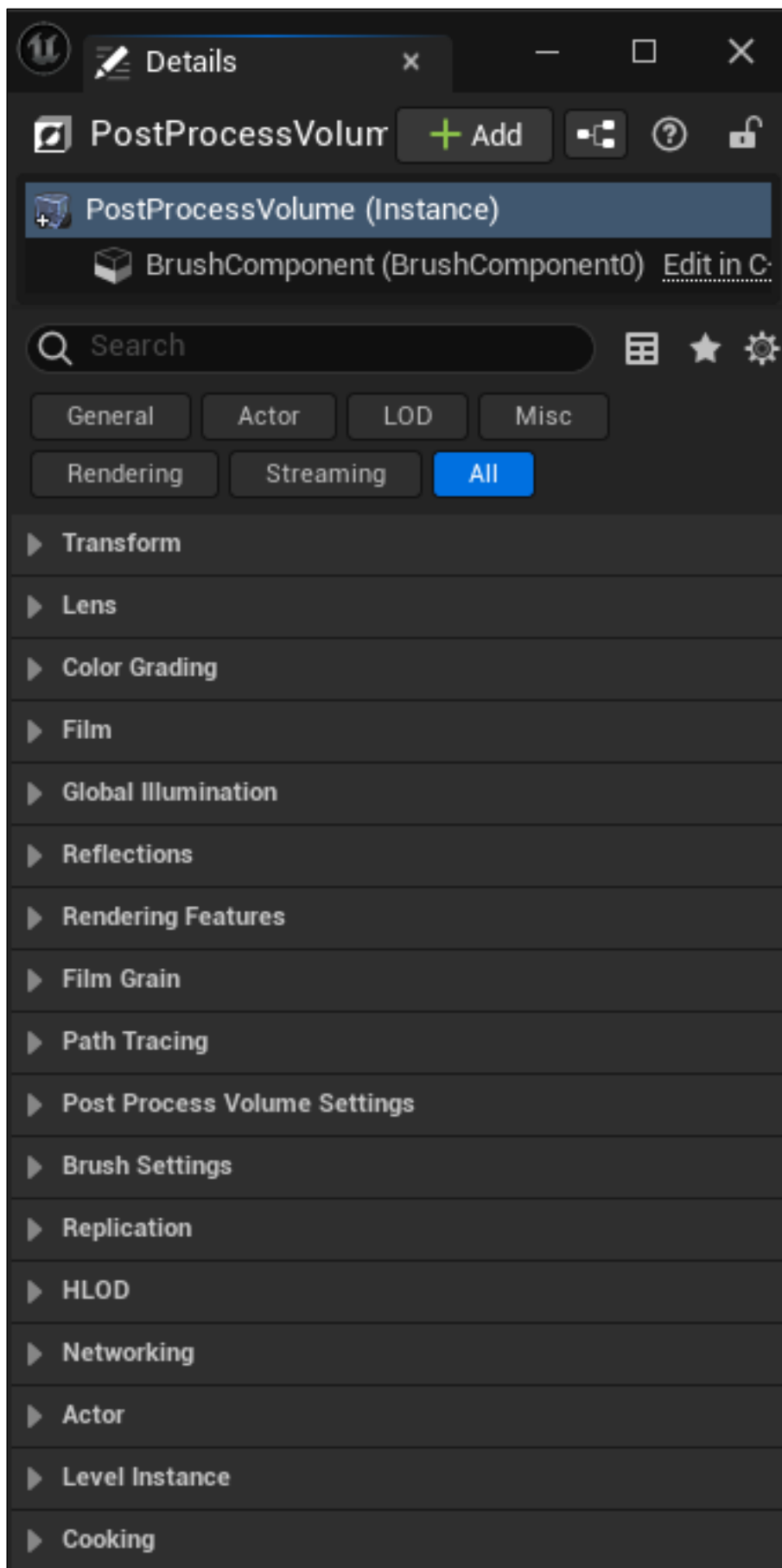
▼ Hardware Ray Tracing	
Support Hardware Ray Tracing	☒
Ray Traced Shadows	☒
Texture LOD	☐
Path Tracing	☒



Chapter 10: Setting up your Post Process Volume







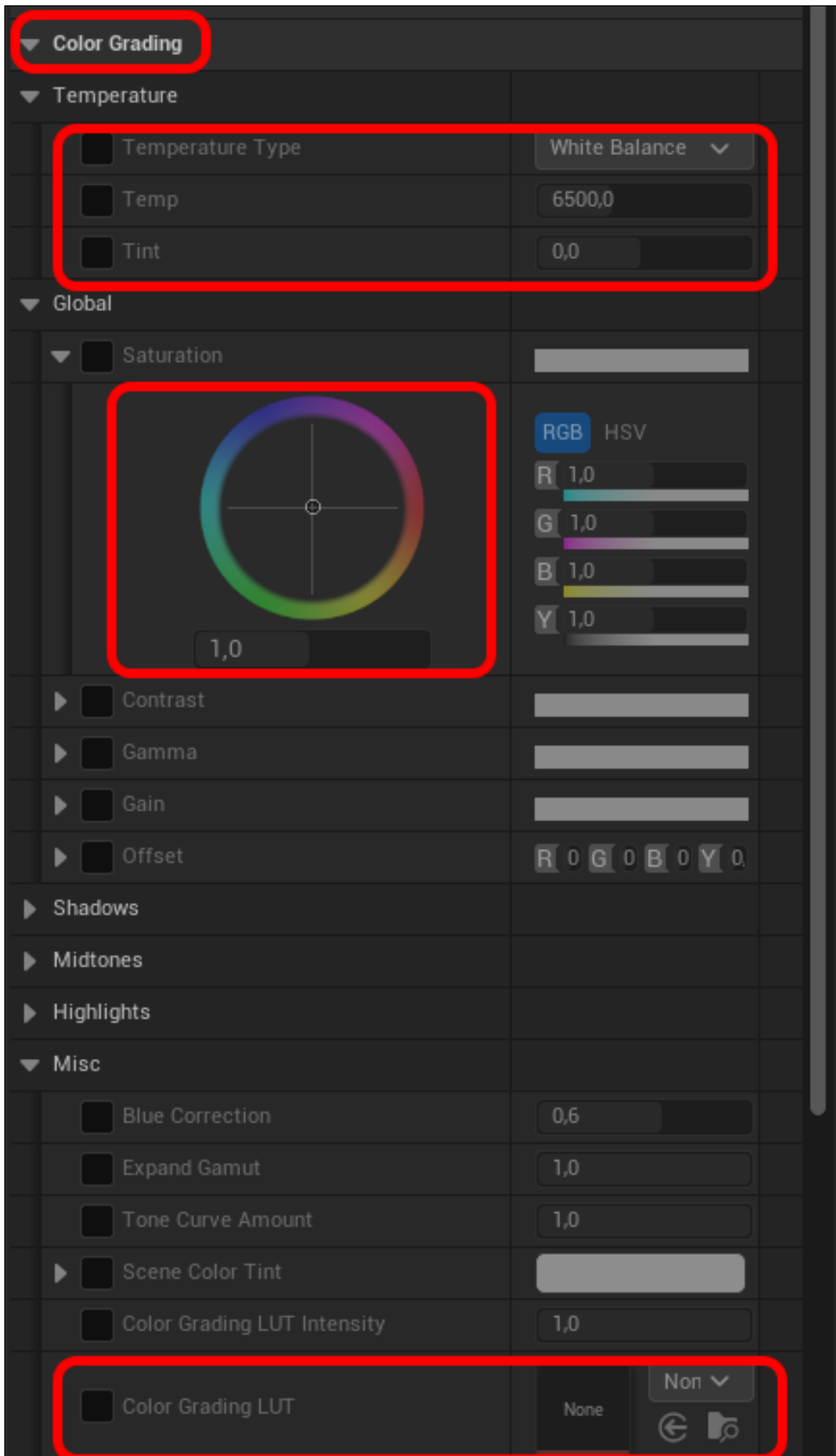
▼ Post Process Volume Settings		
Priority	0,0	
Blend Radius	100,0	
Blend Weight	1,0	
Enabled	☒	
Infinite Extent (Unbound)	☒	↶



▶ Transform	
▼ Lens	
▶ Mobile Depth of Field	
▶ Bloom	
▶ Exposure	
▶ Chromatic Aberration	
▶ Dirt Mask	
▶ Camera	
▶ Local Exposure	
▶ Lens Flares	
▶ Image Effects	
▶ Depth of Field	
▶ Color Grading	
▶ Film	
▶ Global Illumination	
▶ Reflections	
▶ Rendering Features	
▶ Film Grain	
▶ Path Tracing	
▶ Post Process Volume Settings	
▶ Brush Settings	
▶ Replication	
▶ HLOD	







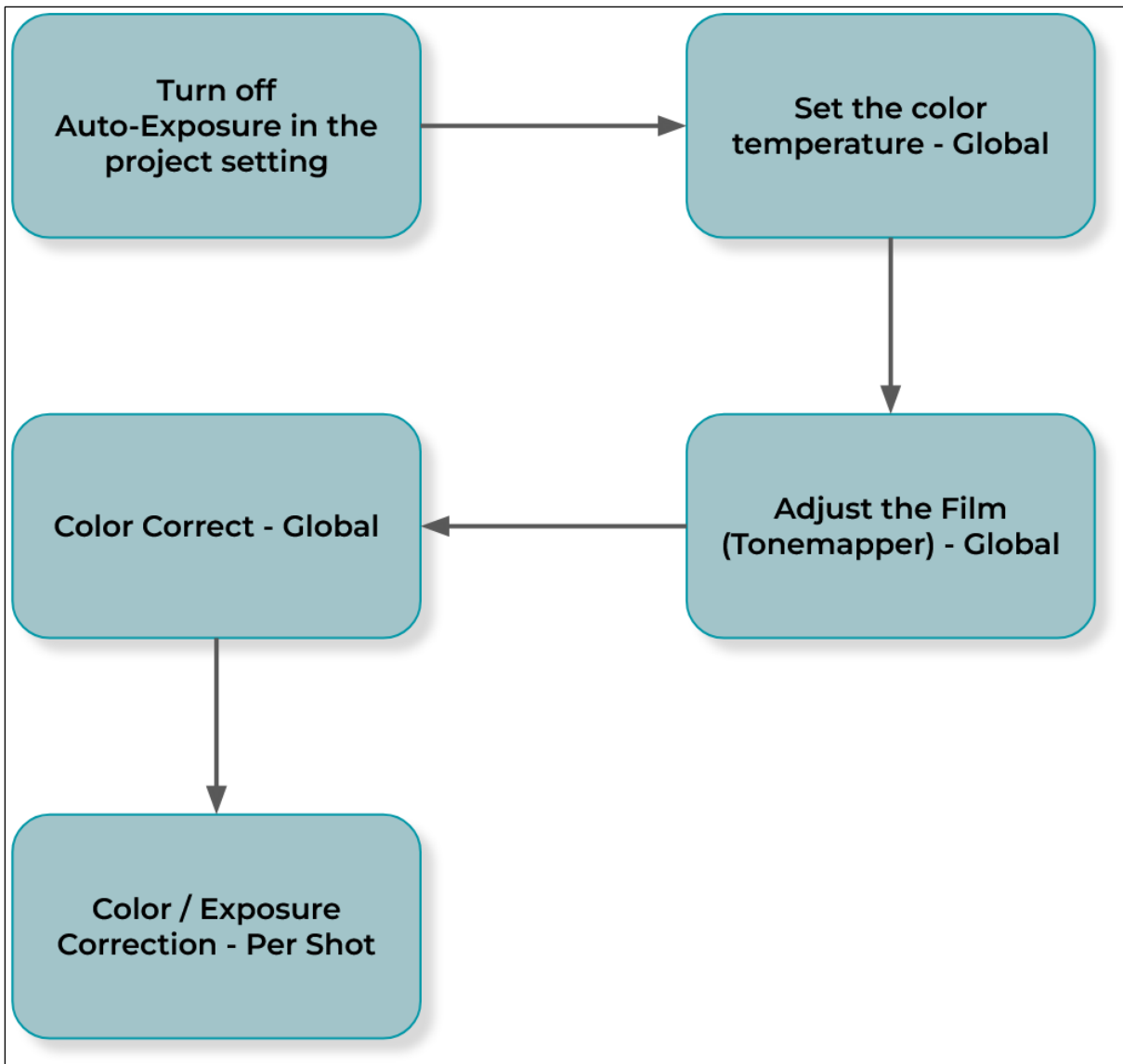
▼ Film

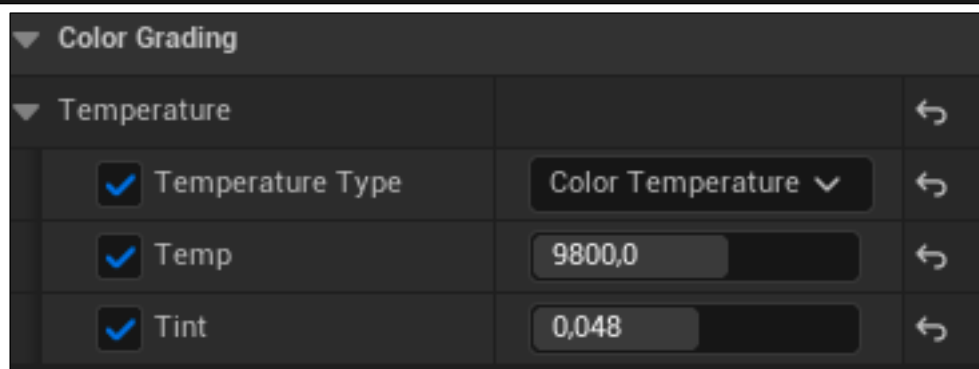
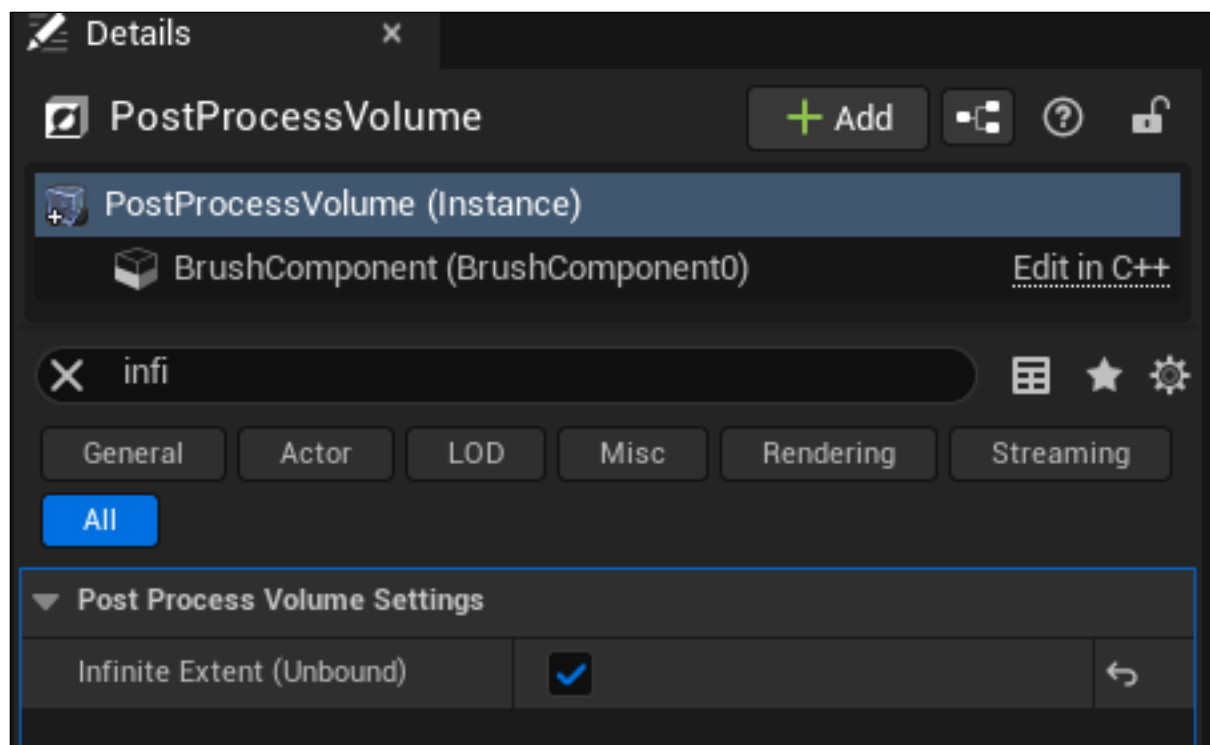
☒ Slope	0,88
☒ Toe	0,55
☒ Shoulder	0,26
☒ Black clip	0,0
☒ White clip	0,04

▼ Global Illumination

☒ Method	Lumen ▼
▶ Lumen Global Illumination	None
▶ Ray Tracing Global Illumination	Lumen
▶ Advanced	Screen Space (Beta)
	Standalone Ray Traced (Deprecated)
	Plugin





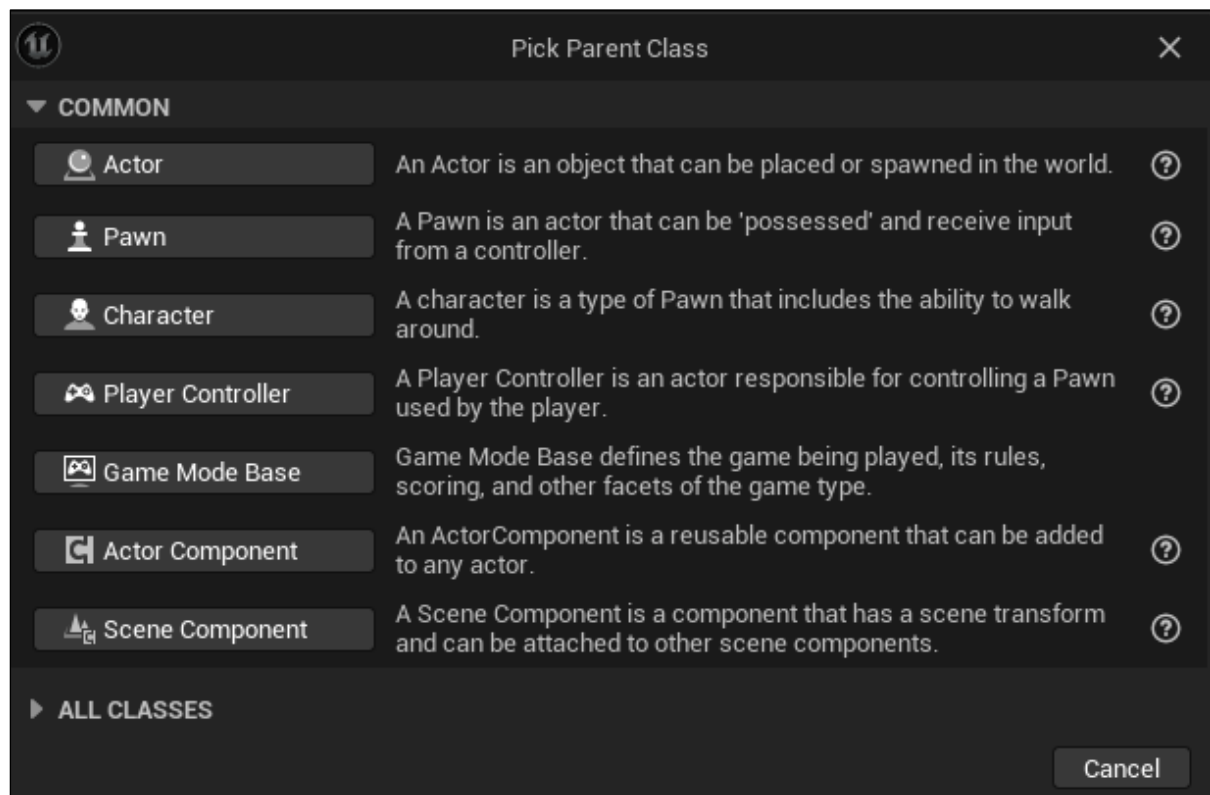
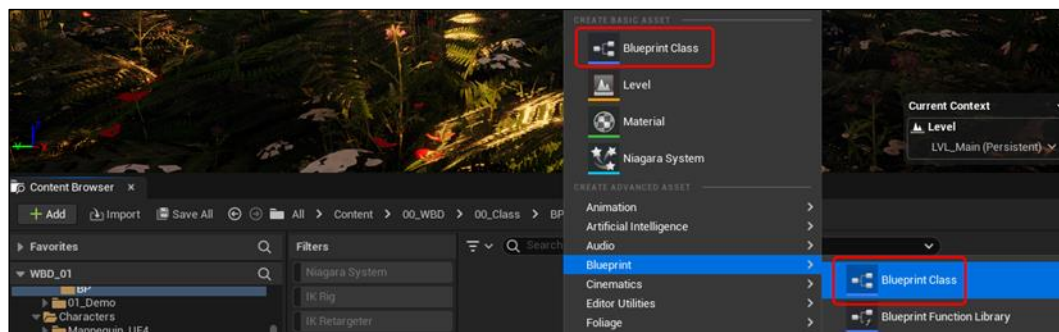
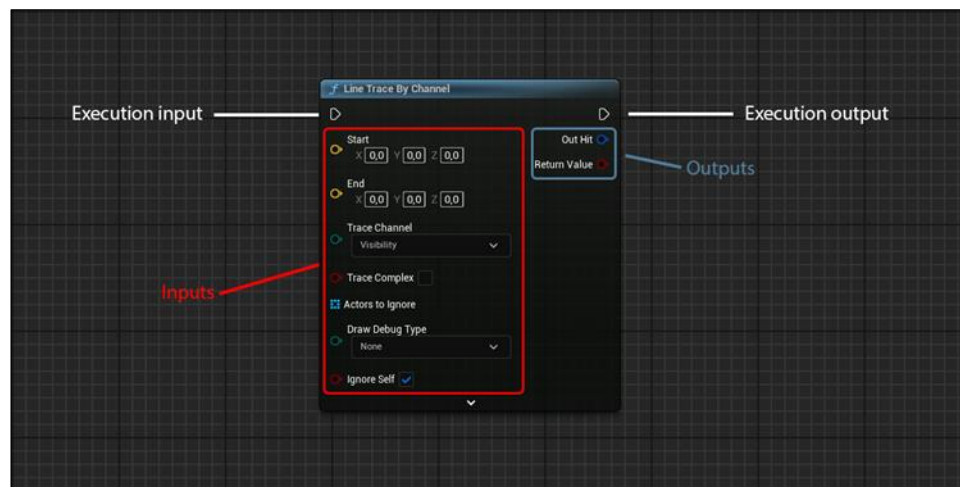


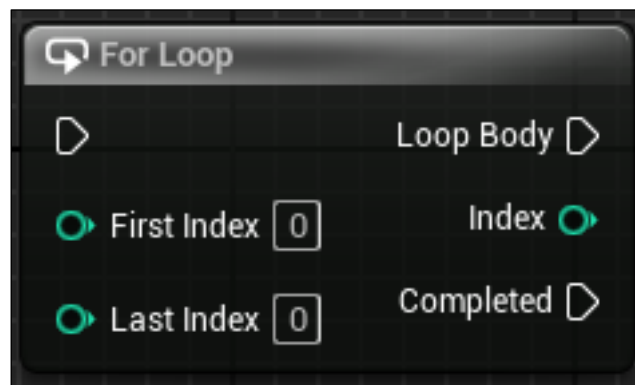
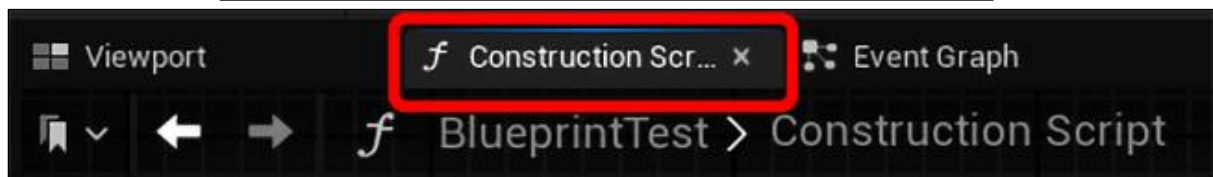
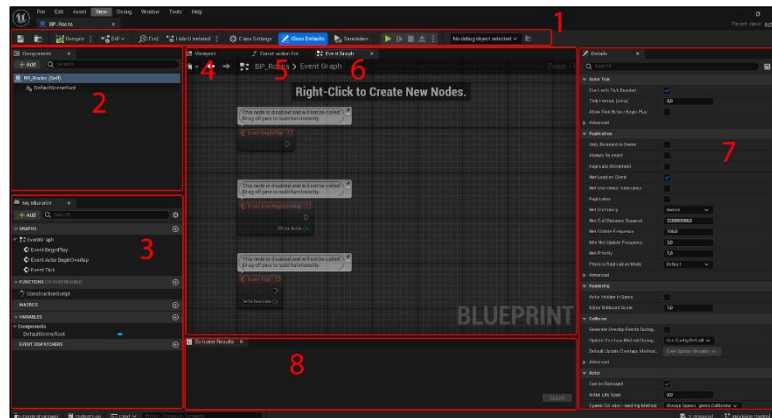
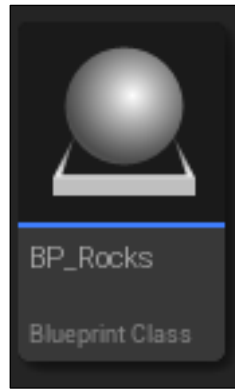
▼ Global		↶
▼ ☒ Saturation		↶
 1,1	RGB HSV R 1,1 G 1,1 B 1,1 Y 1,0	
▼ ☒ Contrast		↶
 1,2	RGB HSV R 1,2 G 1,2 B 1,2 Y 1,0	
▶ ☐ Gamma		
▶ ☐ Gain		
▶ ☐ Offset	R 0,0 G 0,0 B 0,0 Y 0,0	

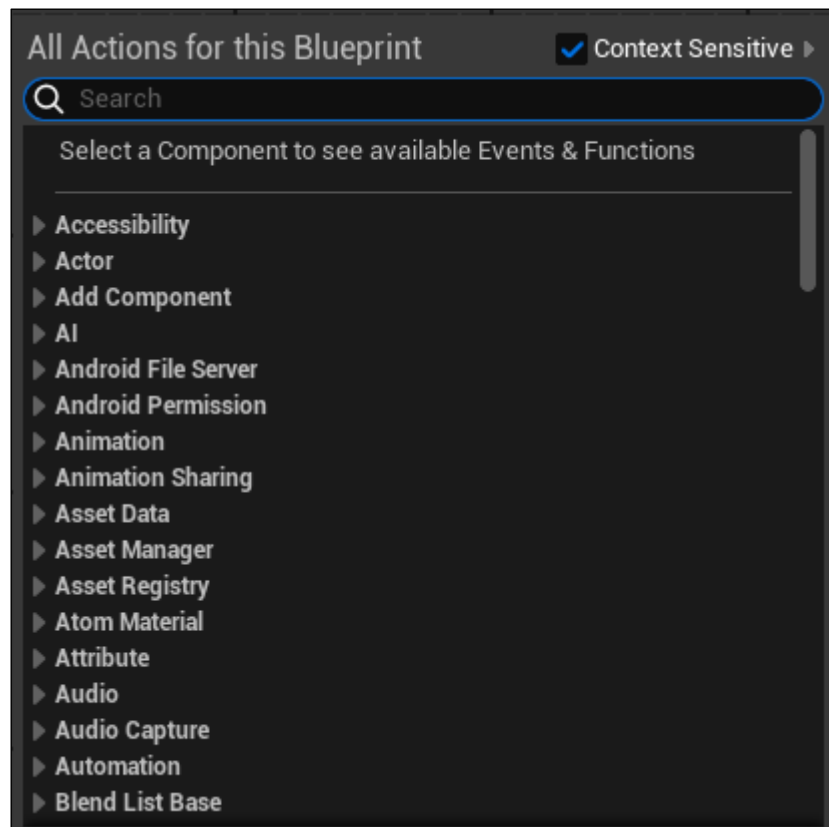
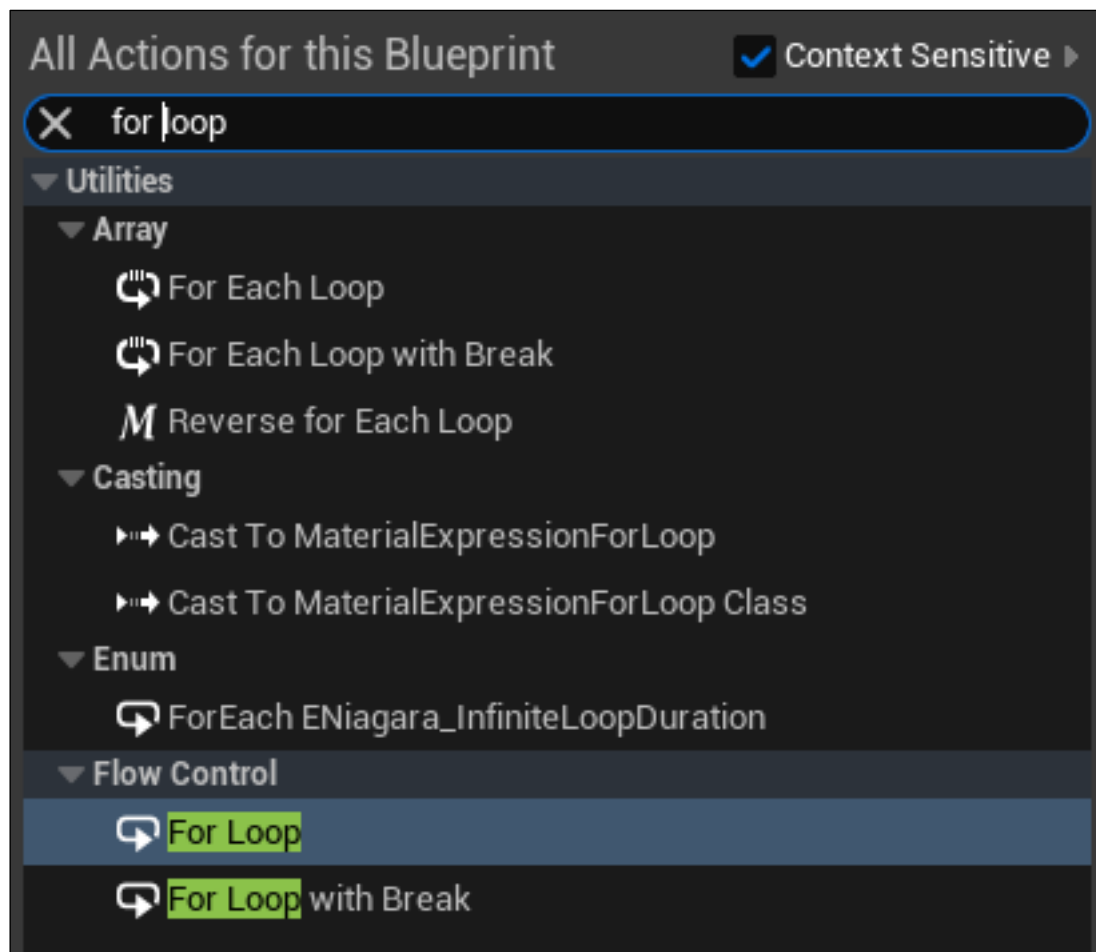
▼ Bloom			
☒	Method	Convolution ▼	↶
☒	Intensity	0,1	↶
☐	Threshold	-1,0	
☐	Convolution Scatter Dispersion	1,0	
☒	Convolution Kernel	None None ▼ ↶ 🔍	
▼ Lens Flares			
☒	Intensity	0,64	↶
▶ ☒	Tint		↶
☒	BokehSize	7,608	↶
☐	Threshold	8,0	
☒	BokehShape	Bokeh_5Sides ▼ ↶ 🔍	↶
▶ ☐	Tints	8 Array elements	
▼ Chromatic Aberration			
☒	Intensity	0,4	↶
☒	Start Offset	0,7	↶
▼ Dirt Mask			
☒	Dirt Mask Texture	T_ScreenDirt02 ▼ ↶ 🔍	↶
☒	Dirt Mask Intensity	120,0	↶
▶ ☐	Dirt Mask Tint		

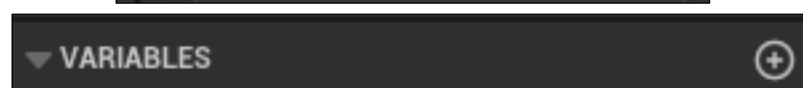
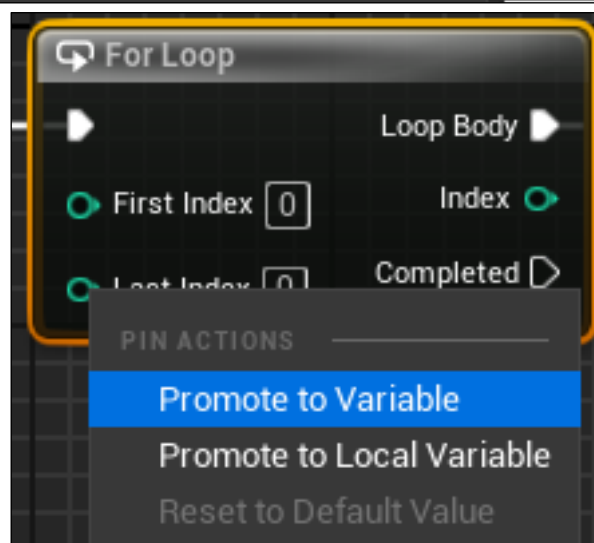
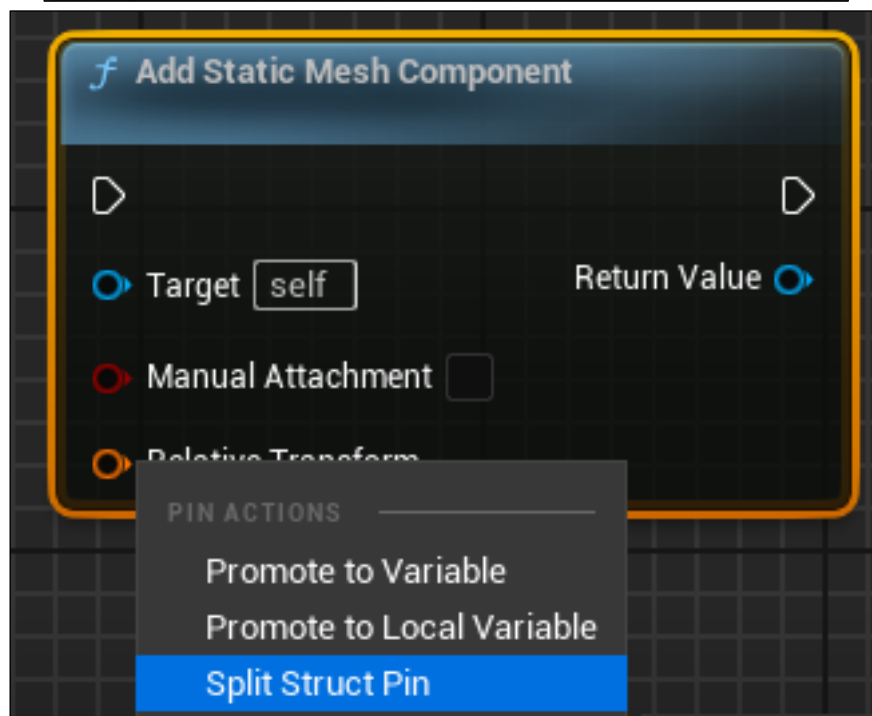


Chapter 11: Understanding Programming Logic and Blueprints









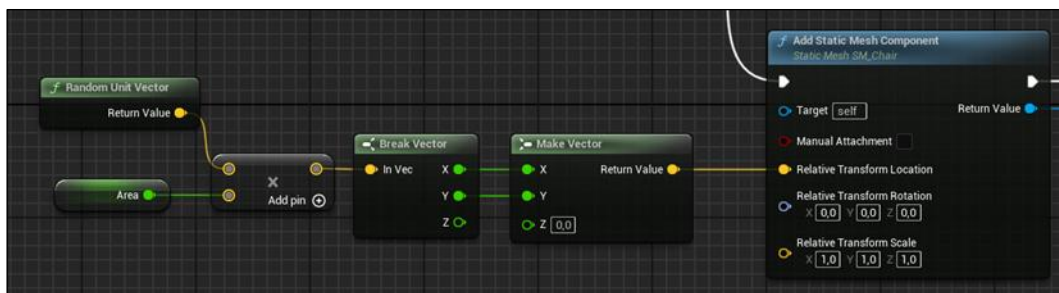
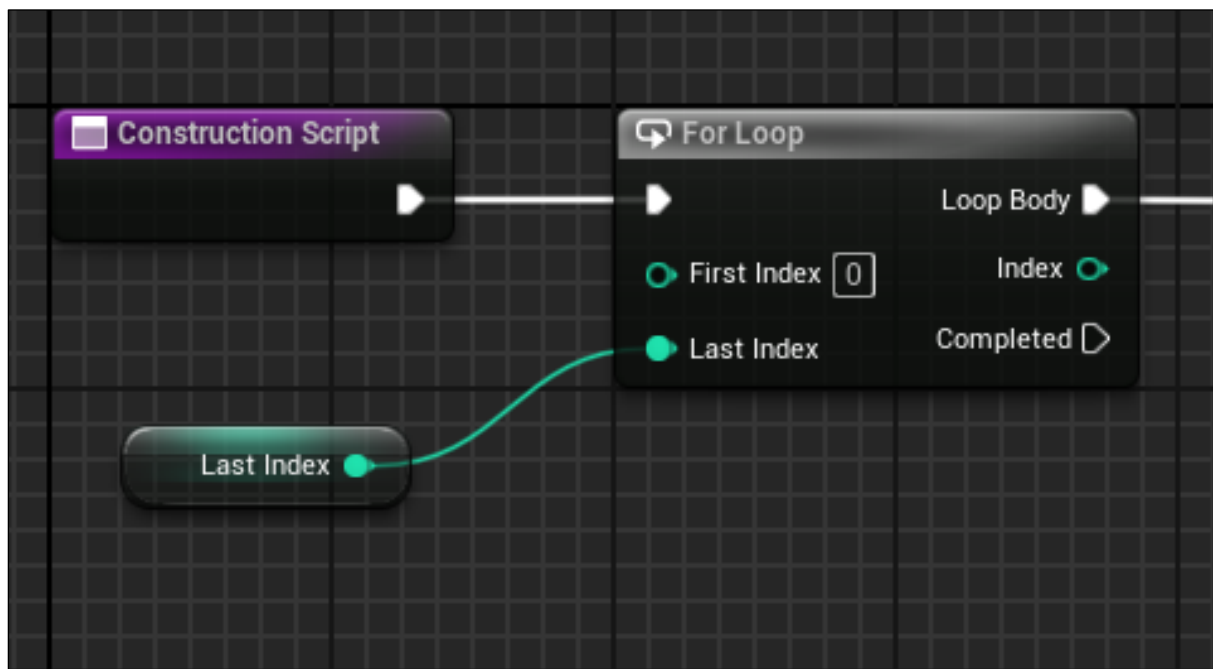
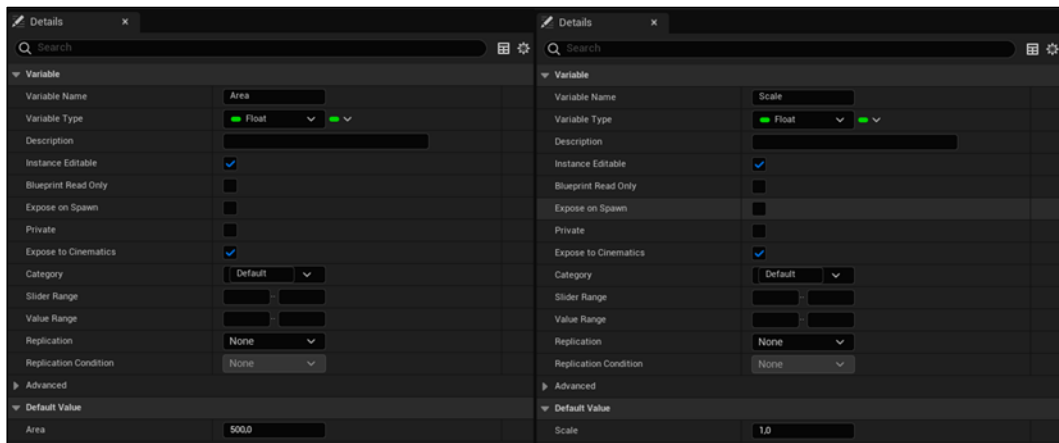
Q Search

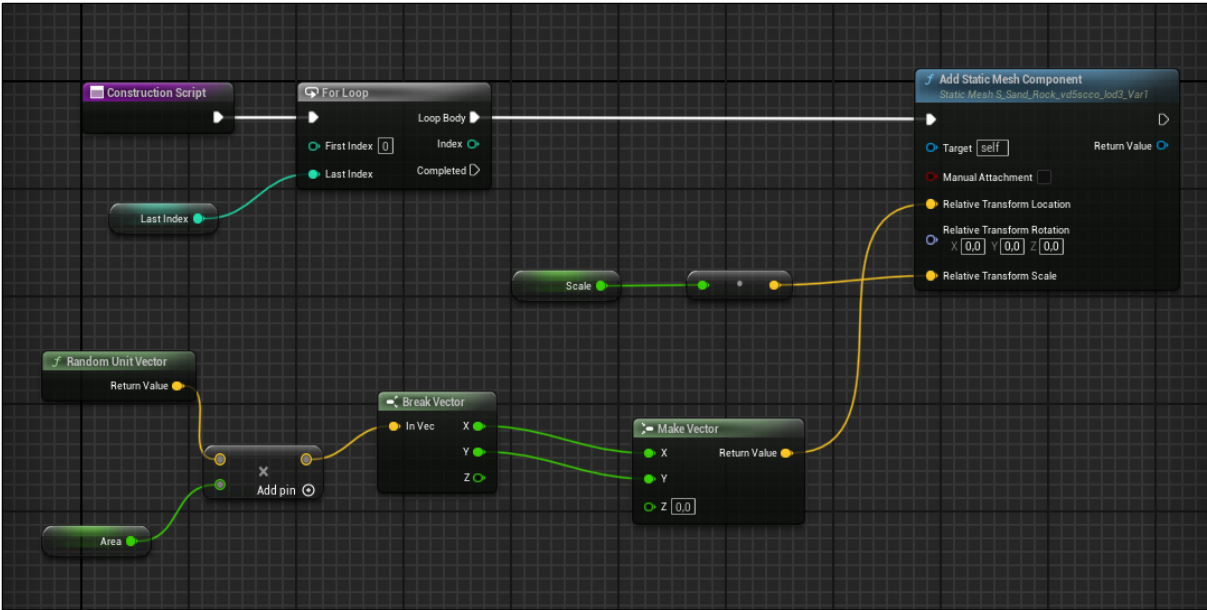
- Boolean
- Byte
- Integer
- Integer64
- Float
- Name
- String
- Text
- Vector
- Rotator
- Transform

- ▶ **Structure**
- ▶ **Interface**
- ▶ **Object Types**
- ▶ **Enum**

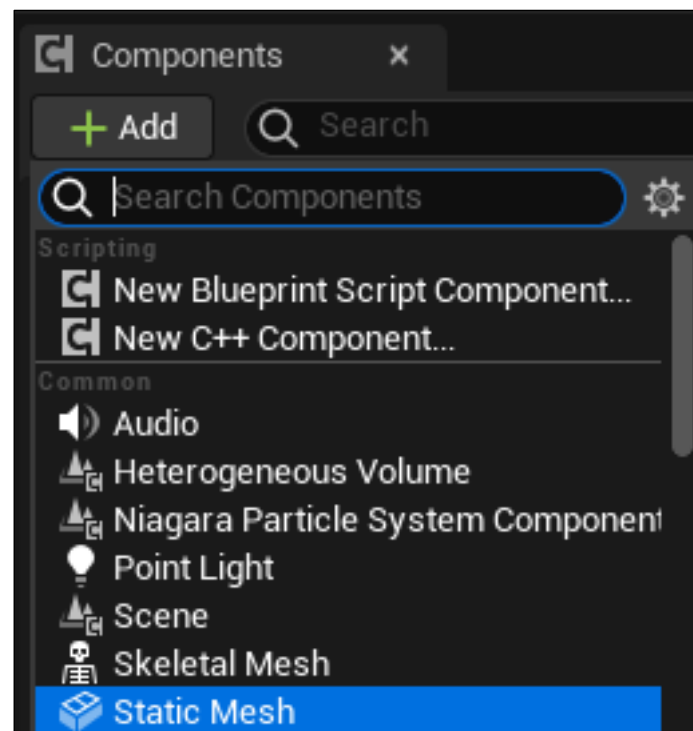
5038 items

☒ Hide Non-Imported Types





Default	
Last Index	25
Area	768,156311
Scale	5,0





Components



Add



Search



BP_Asesmbly_01 (Self)



DefaultSceneRoot



SM_Tomb



SM_Statue_01



SM_Statue_02



SM_Floor



SM_Pillar_02



SM_Pillar_01



SM_gravestone_02



SM_gravestone_01



RectLight



SM_Floor1



SM_Bol_02



Niagara



SM_Bol



SM_Fruit_01



SM_Fruit_02



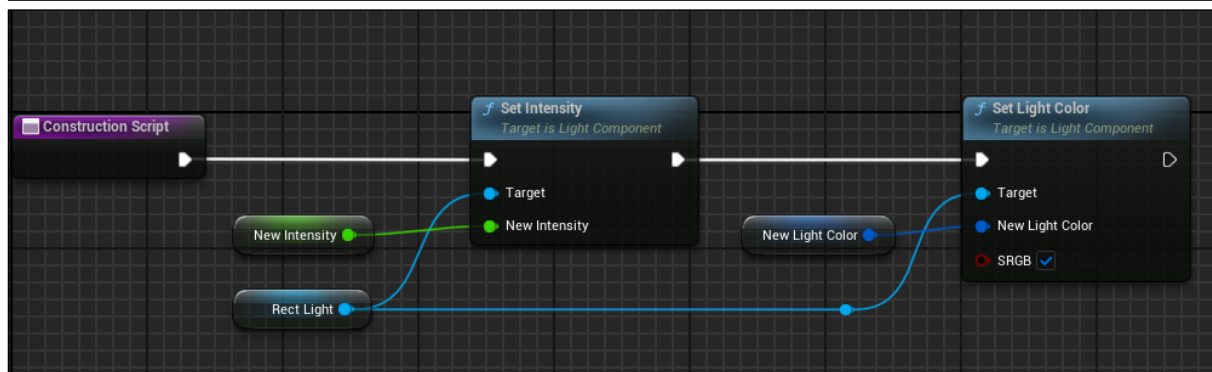
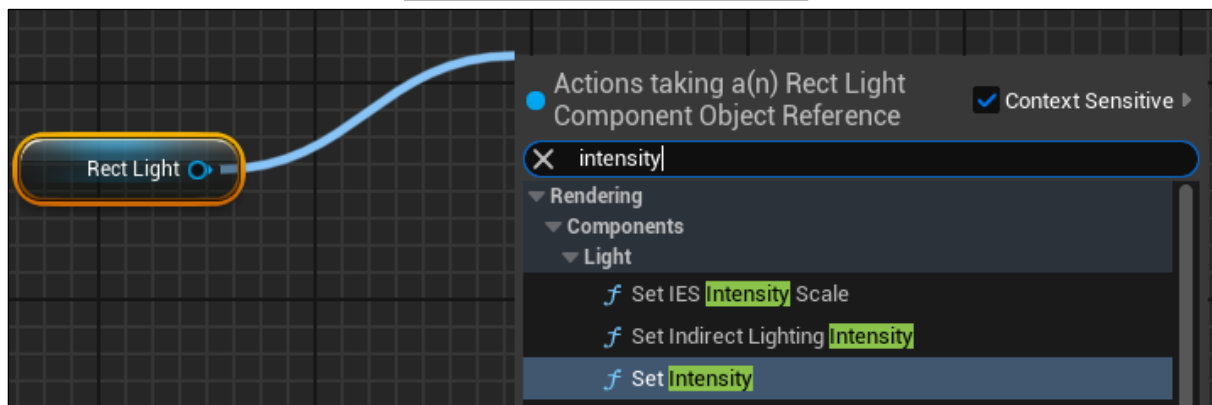
SM_Fruit_05

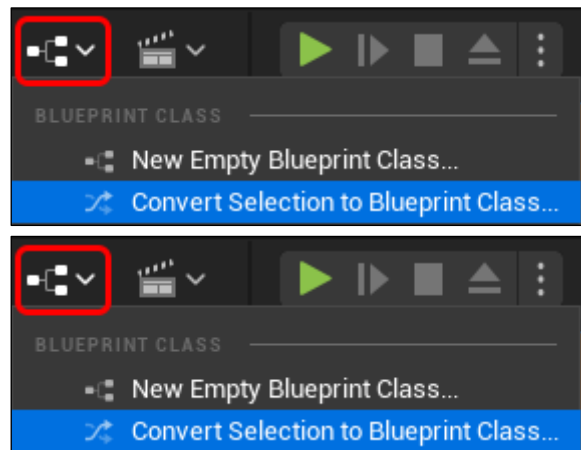


SM_Fruit_04



SM_Fruit_03





Create Blueprint From Selection

▼ Creation Method

New Subclass

Replace the selected actor with an instance of a new Blueprint Class inherited from the selected parent class.

Child Actors

Replace the selected actors with an instance of a new Blueprint Class inherited from the selected parent class with each of the selected Actors as a Child Actor.

Harvest Components

Replace the selected actors with an instance of a new Blueprint Class inherited from the selected parent class that contains the components.

▼ Parent Class

Search

▼ Object

▼ Actor

AITesting_MoveGoal

AmbientSound

AnimationEditorPreviewActor

Blueprint_CeilingLight

Blueprint_Effect_Explosion

Blueprint_Effect_Fire

Blueprint_Effect_Smoke

Blueprint_Effect_Sparkle

209 items (1 selected)

Blueprint Name

S_Japanese_Shrine_Stone_Floor_uf1hef3ga_lod5_Var1_Blueprint

Path

/All/Game/Megascans/3D_Assets/Japanese_Gravestone_ucmmfjgfa

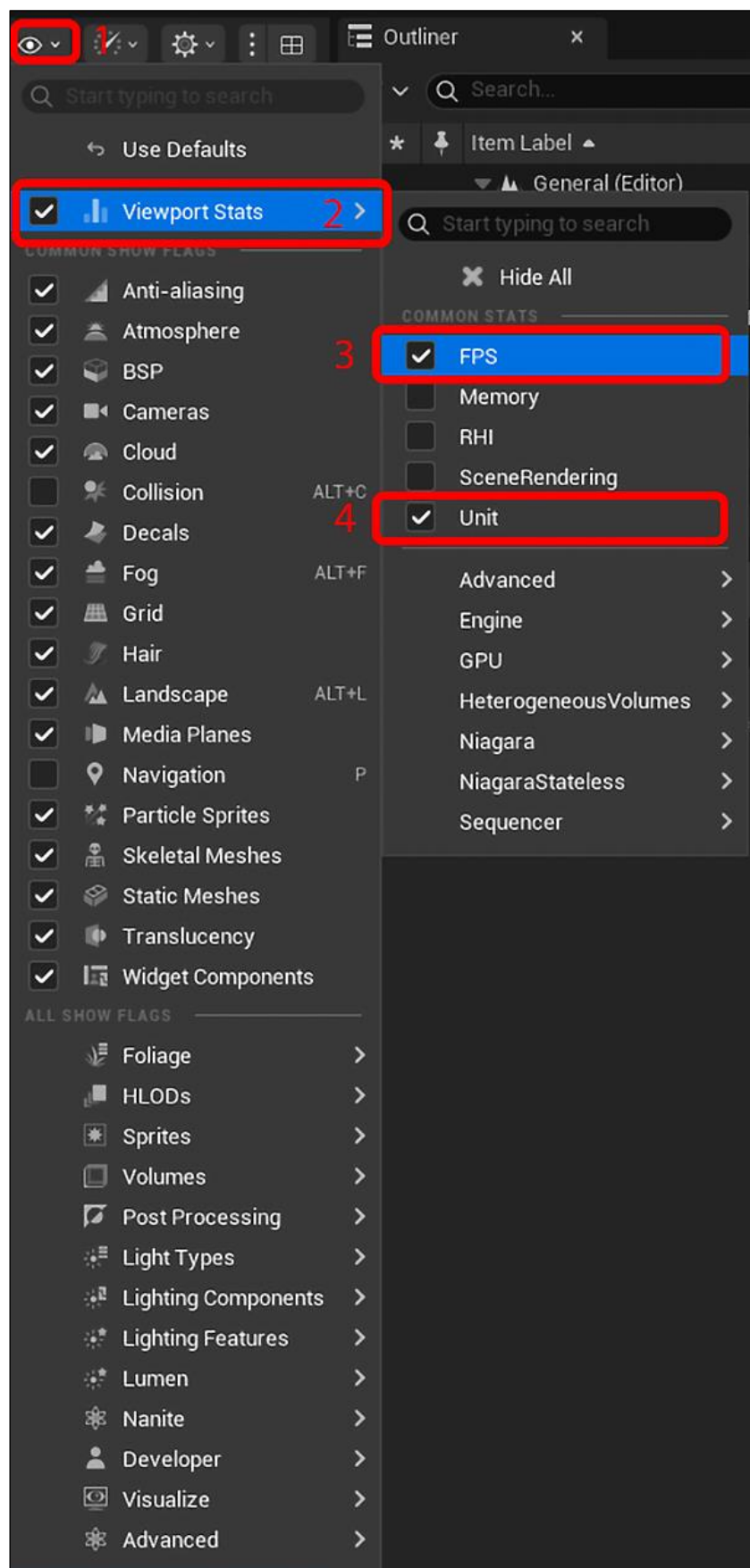
Select

Cancel



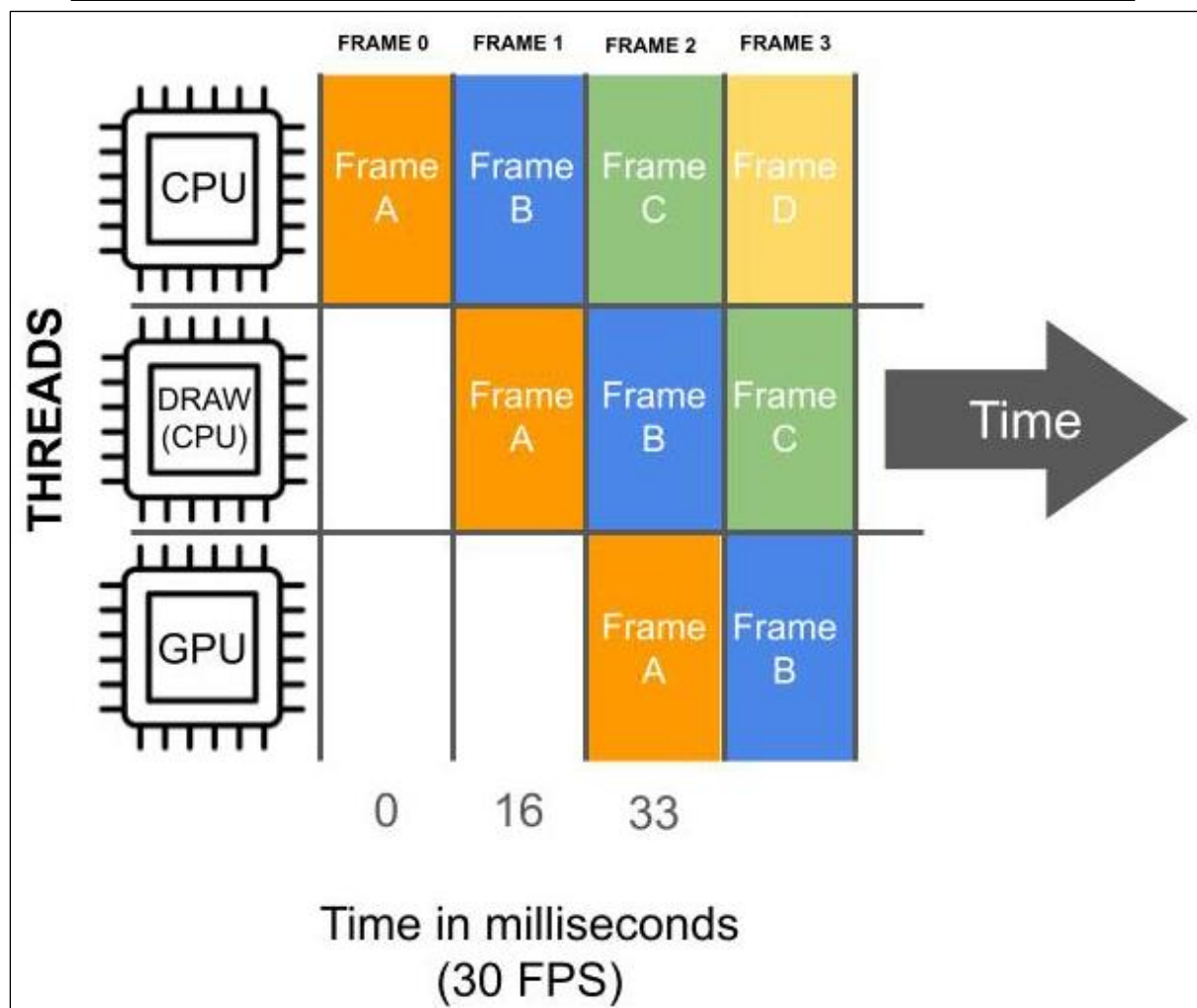


Chapter 12: Optimizing and Testing Your Scene



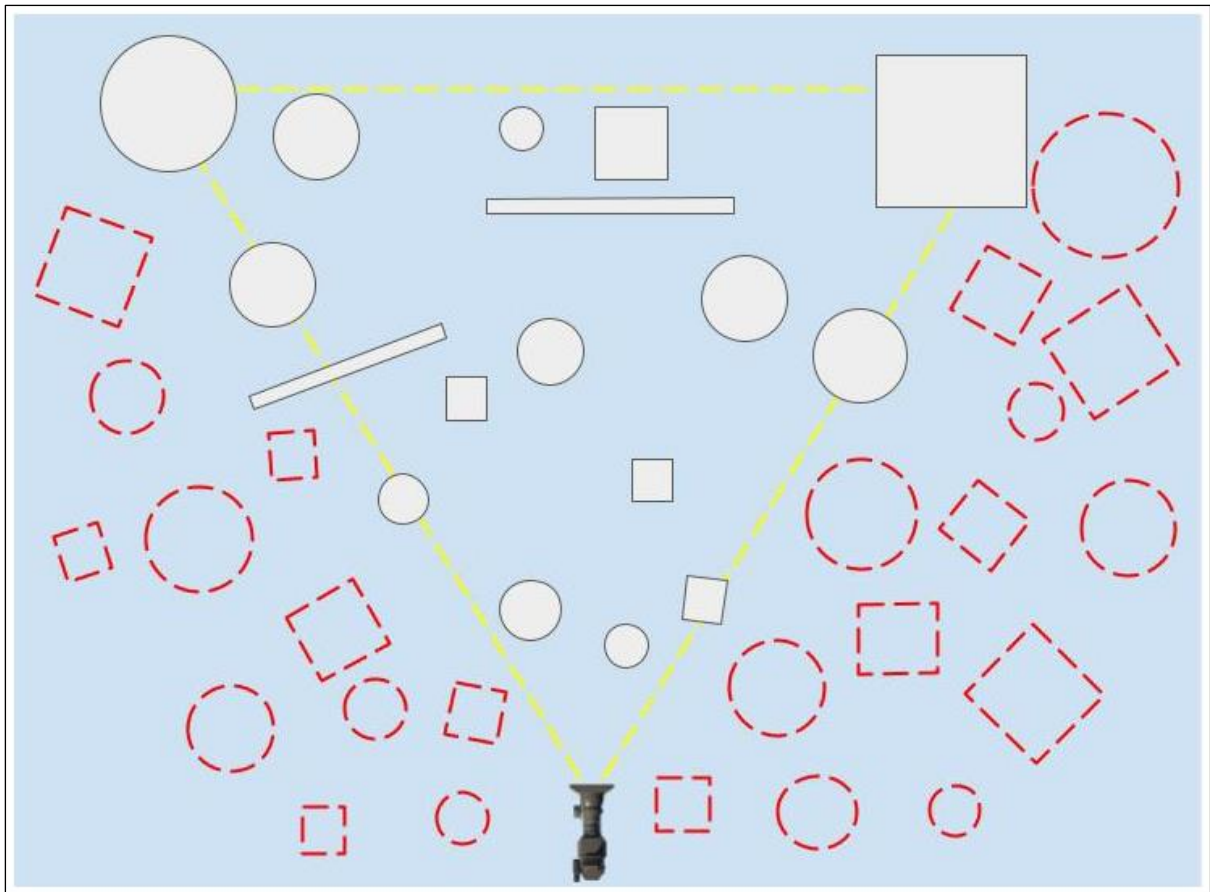


```
> Cmd ▾ stat unit|
```



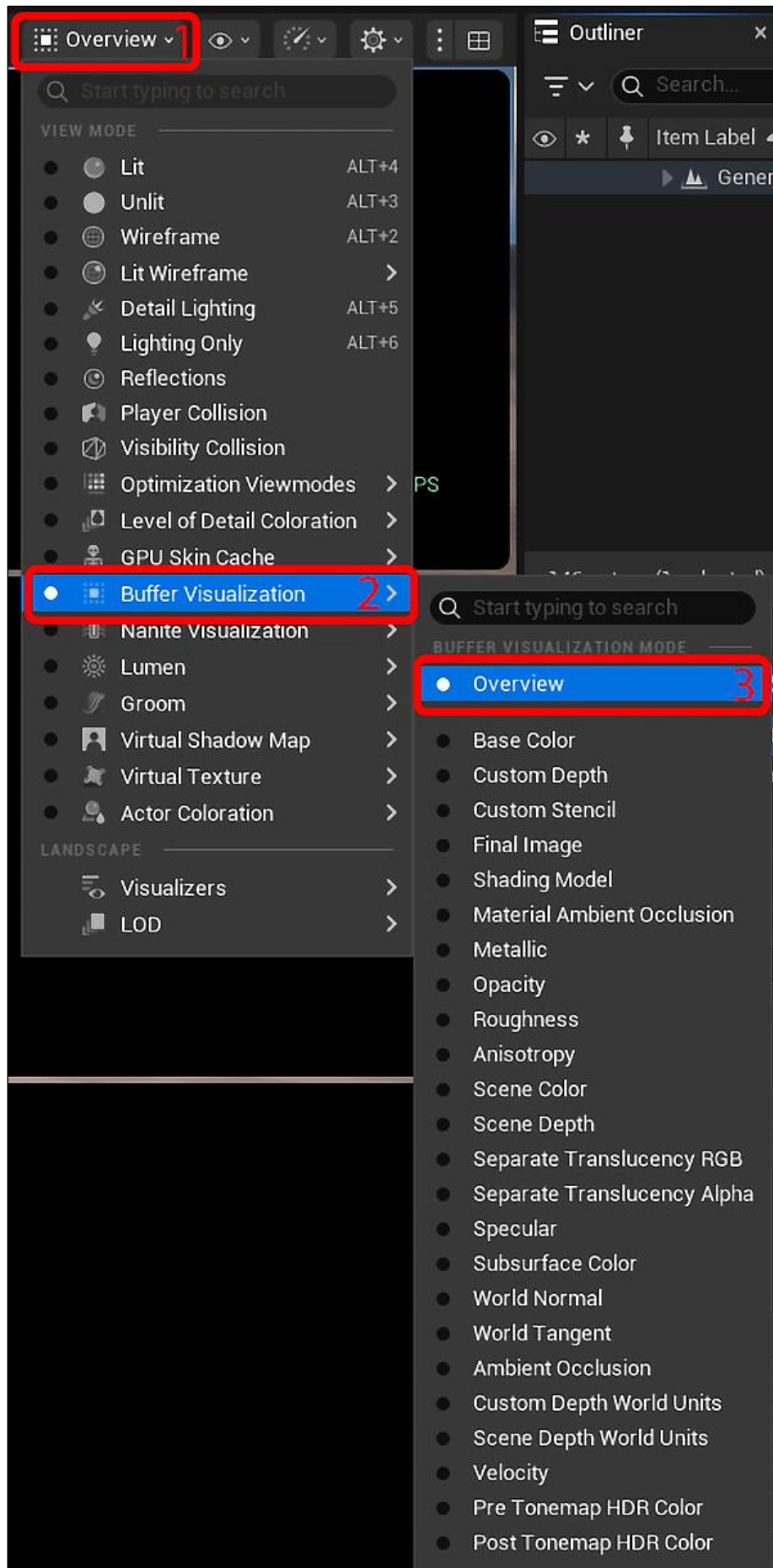
Game: 19.66 ms
Draw: 35.57 ms
RHIT: 22.87 ms
GPU Time: 35.16 ms
DynRes: Unsupported
Draws: 599
Prims: 63.5K

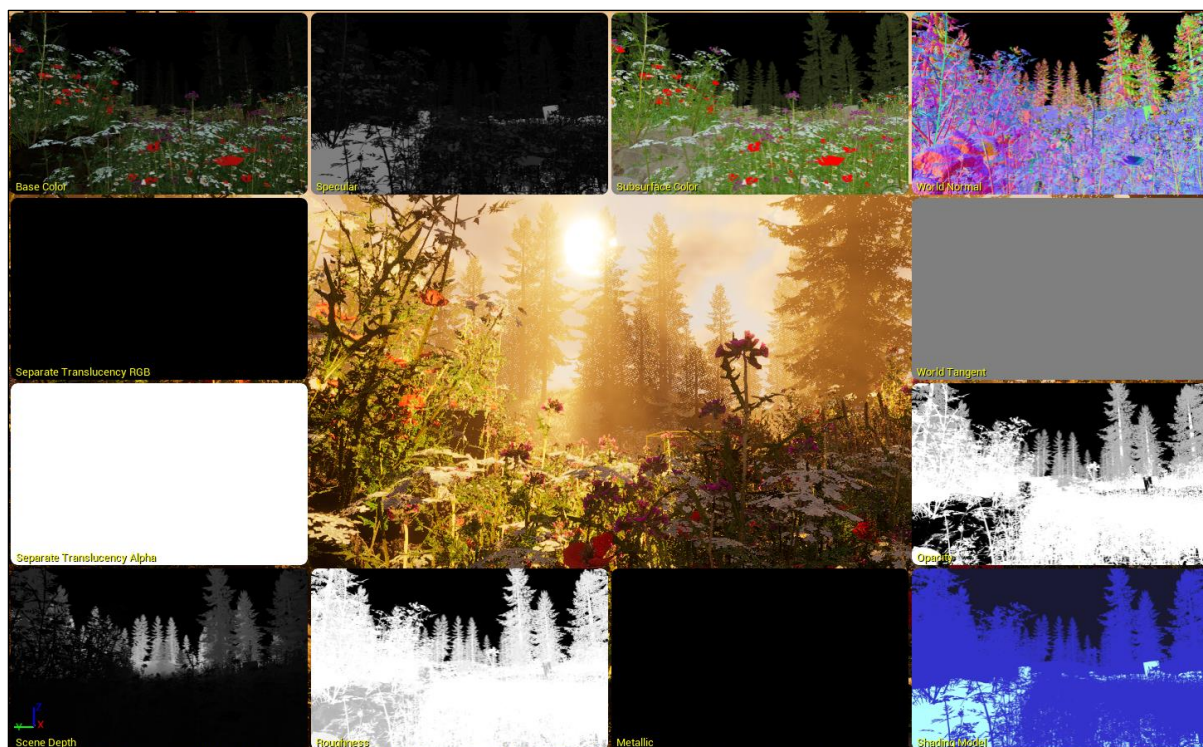




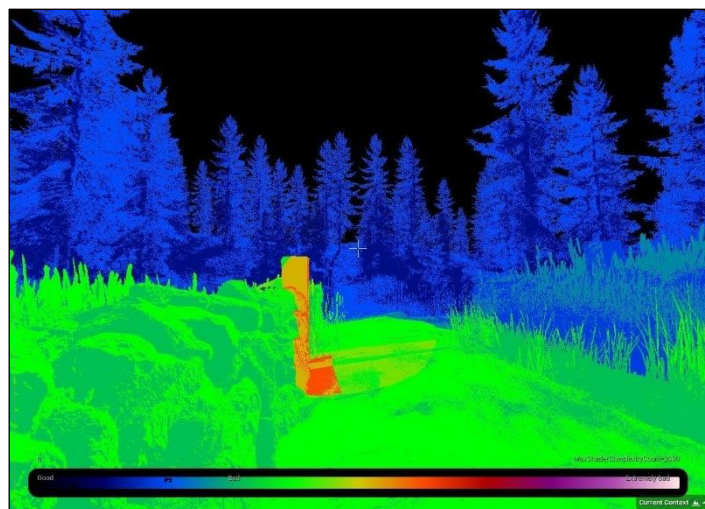
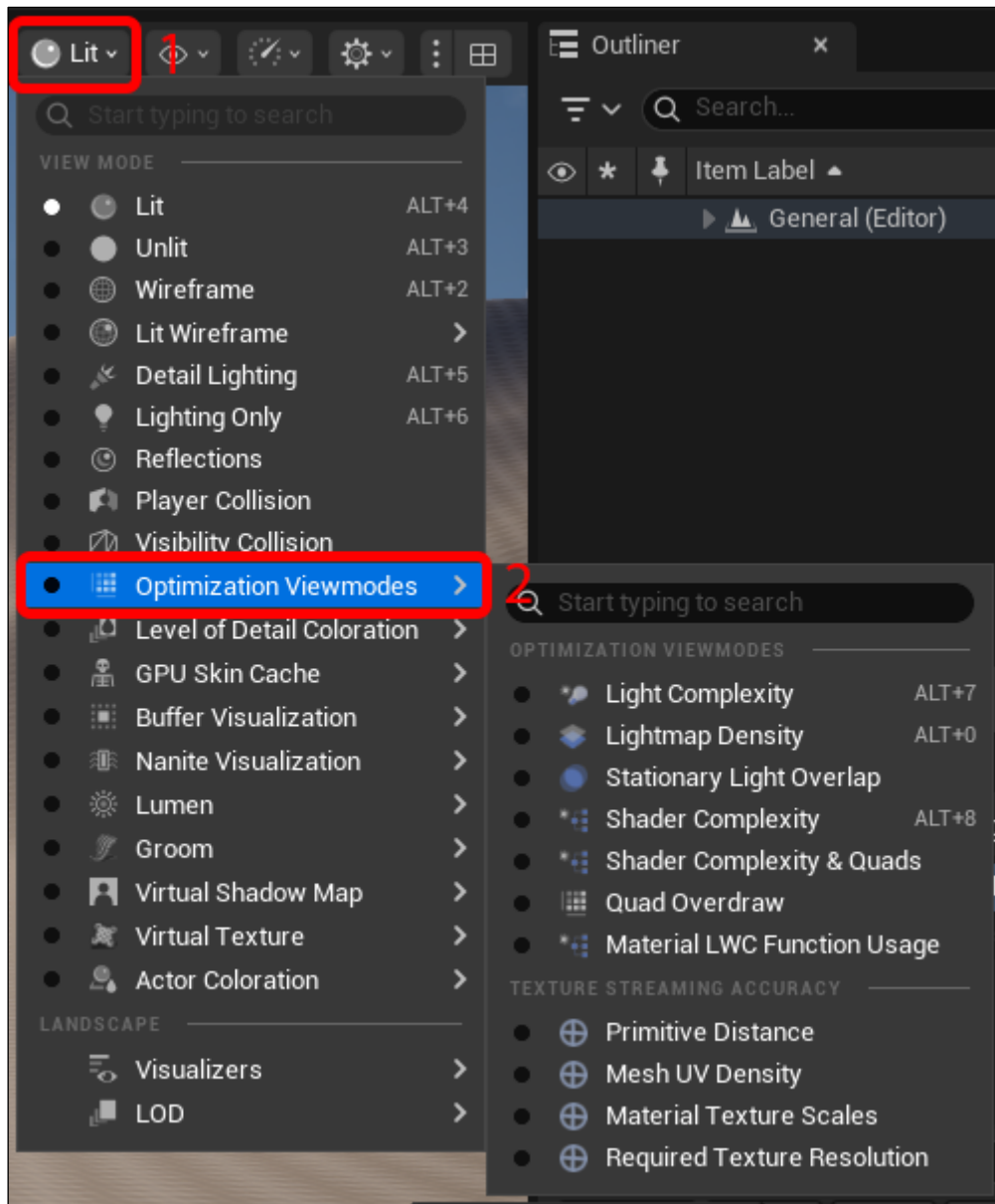
Game: 19.66 ms
Draw: 35.57 ms
FHIT: 22.87 ms
GPU Time: 35.16 ms
DynRes: Unsupported
Draws: 599
Prims: 63.5K

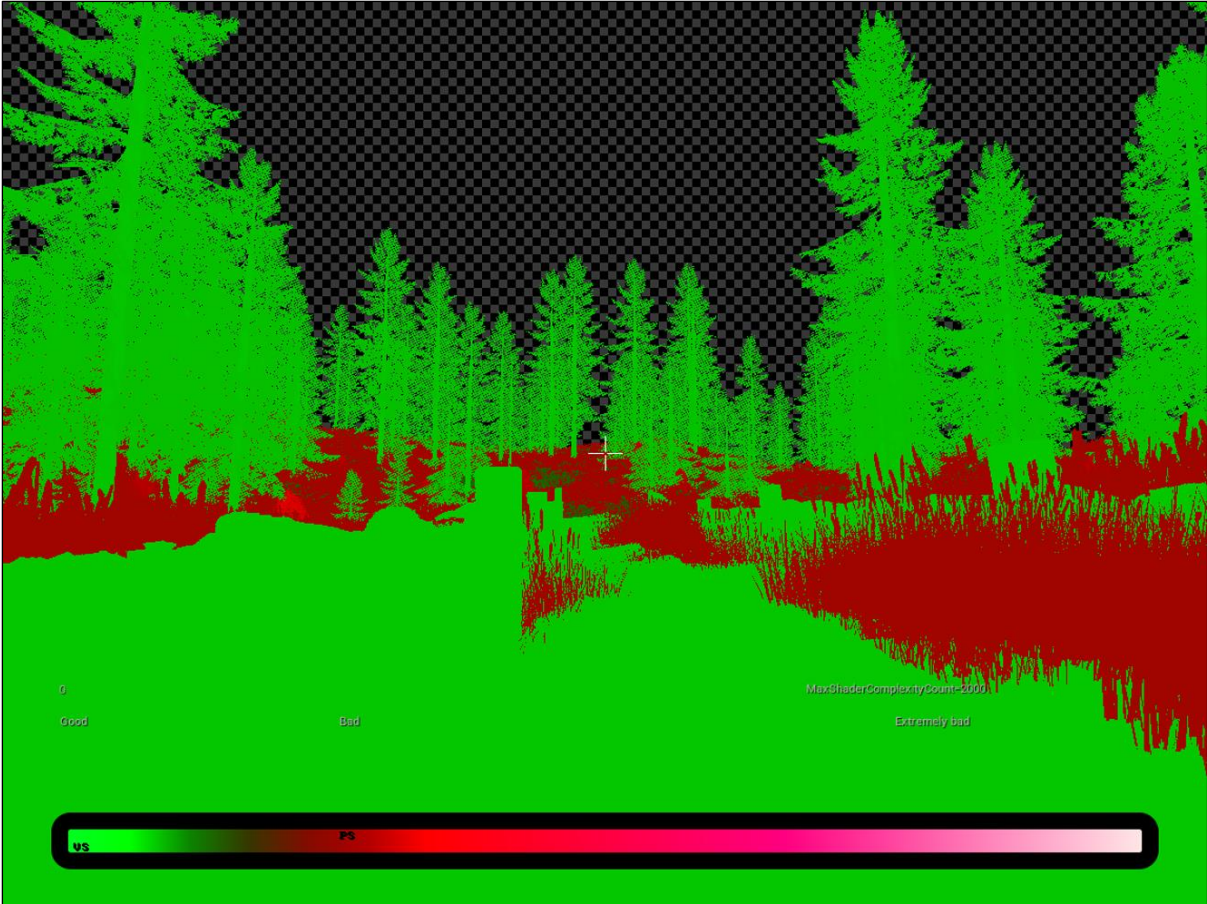
Game: 19.66 ms
Draw: 35.57 ms
FHIT: 22.87 ms
GPU Time: 35.16 ms
DynRes: Unsupported
Draws: 599
Prims: 63.5K

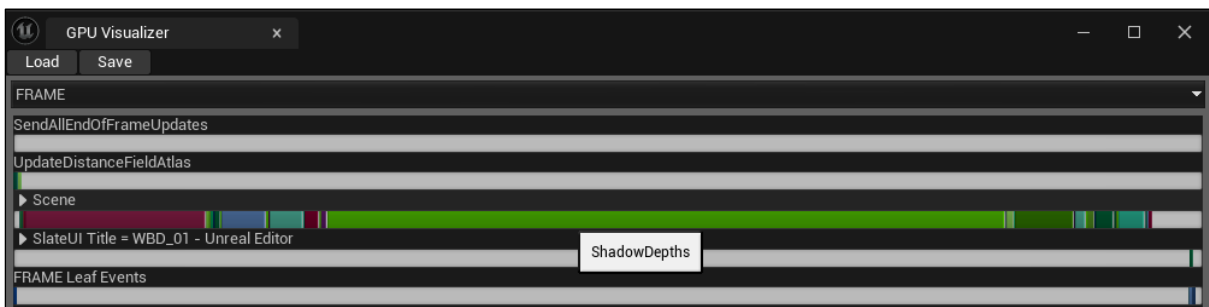
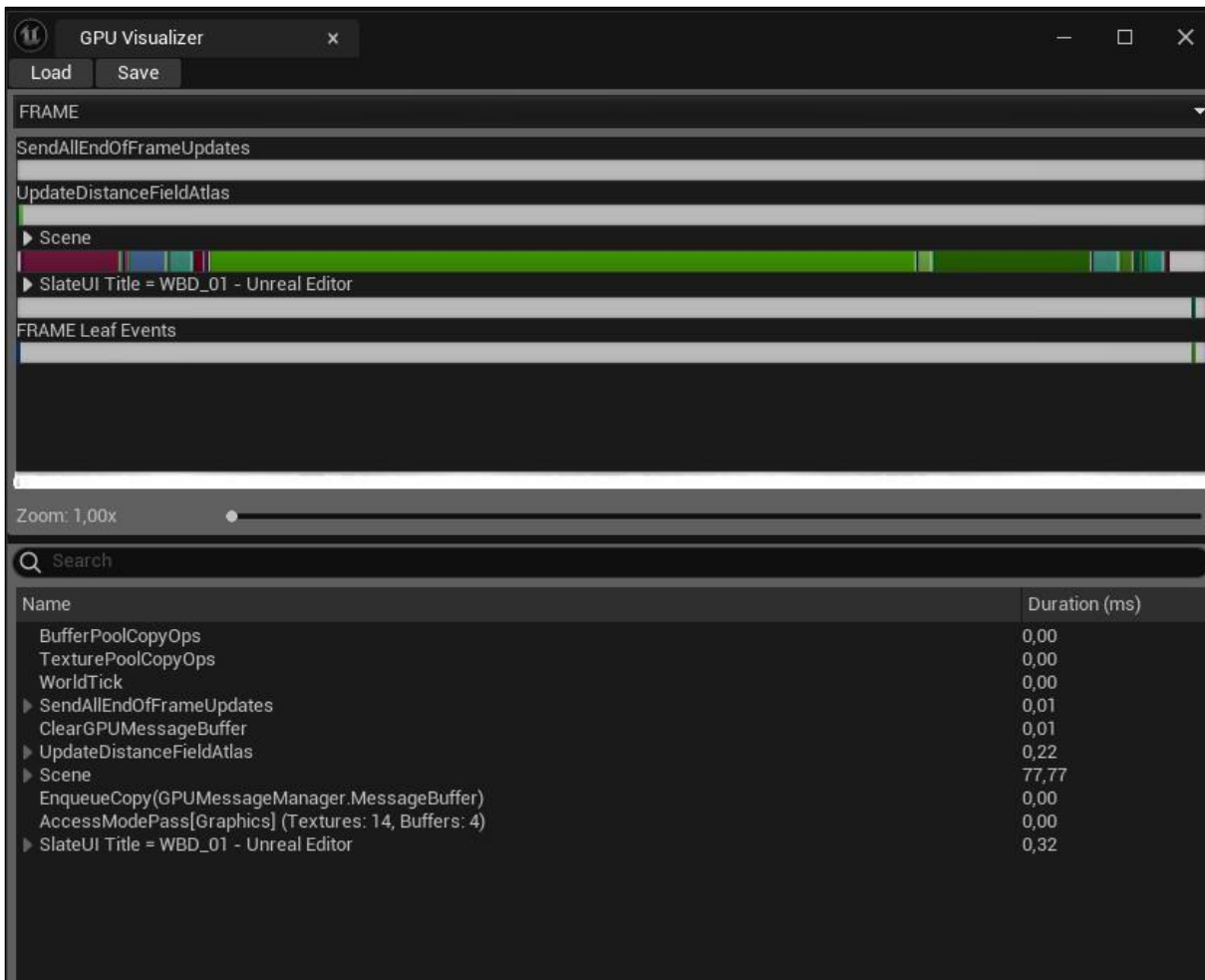




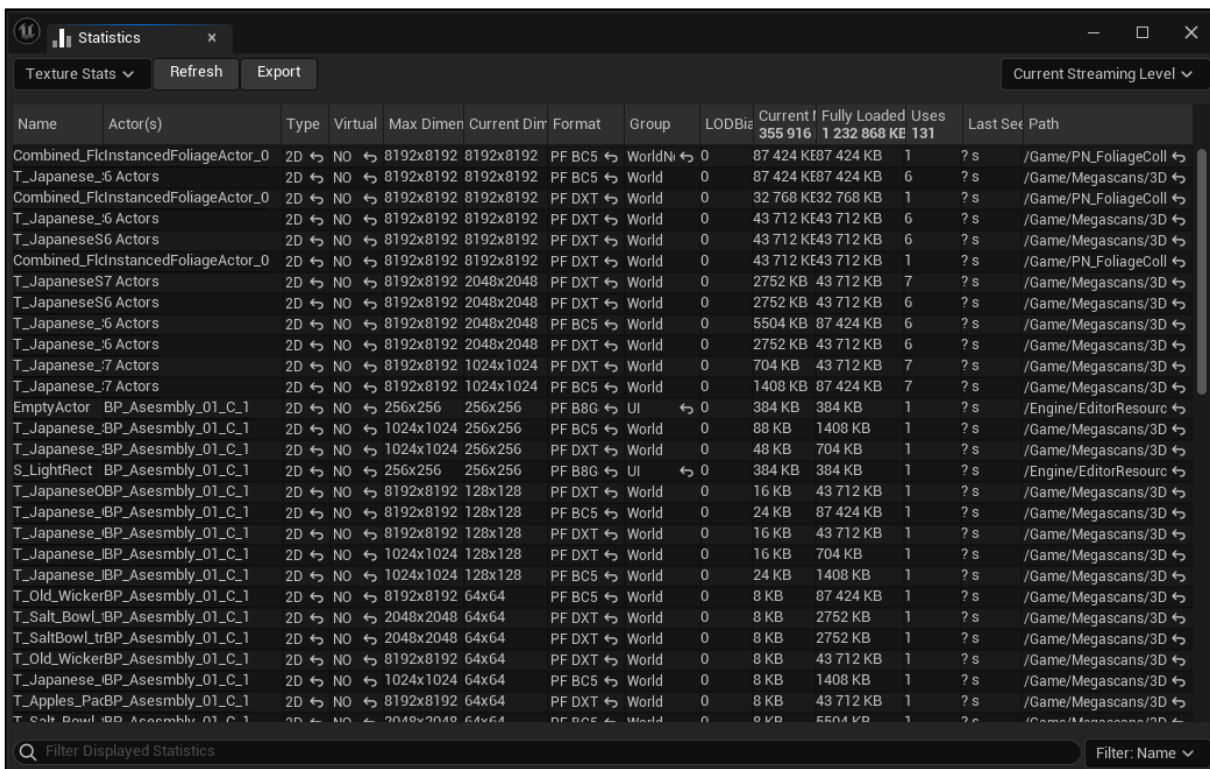
Game: 19.66 ms
Draw: 35.57 ms
RHIT: 22.87 ms
GPU Time: 35.16 ms
DynRes: Unsupported
Draws: 599
Prims: 63.5K







Name	Duration (ms)
▼ Scene	25,96
▼ ShadowDepths	15,08
▼ RenderVirtualShadowMaps(Nanite)	14,95
▼ Nanite::DrawGeometry	14,93
▼ MainPass	14,38
SW Rasterize	8,78
HW Rasterize	4,25
PersistentCull	0,92
InstanceCullVSM	0,32
RasterBinCount	0,05
RasterBinScatter	0,04
RasterBinReserve	0,00
CalculateSafeRasterizerArgs	0,00
ClearBuffer(Nanite.RangeAllocatorBuffer Size=4bytes)	0,00
▶ PostPass	0,50
▶ BuildPreviousOccluderHZB(VSM)	0,02
CompactViewsVSM	0,01
InitArgs	0,00
ClearBuffer(Shadow.Virtual.CompactedViewsAllocation Size=8bytes)	0,00
NaniteFeedbackStatus	0,00
BuildHZBPerPage	0,00
BuildHZBPerPageTop	0,00
SelectPassForHZB	0,00



Resource Usage						
Resource Type	Loaded			Built		
	Count	Time (Sec)	Size (MiB)	Count	Time (Sec)	Size (MiB)
Texture	1872	5,0	357,1	0	0,0	0,0
StaticMesh	451	0,8	85,6	0	0,0	0,0
GlobalShader	381	1,4	71,9	0	0,0	0,0
MaterialShader	41	0,2	44,3	1	0,0	0,0
Shader	124	0,7	3,4	0	0,0	0,0
DistanceField	73	0,3	3,3	0	0,0	0,0
BodySetup	7	0,1	2,9	0	0,0	0,0
Audio	48	0,1	0,3	0	0,0	0,0
BulkDataList	227	0,9	0,1	23	0,0	0,0
NavCollision	73	0,1	0,0	0	0,0	0,0
NiagaraScript	4	0,0	0,0	0	0,0	0,0
CardRepresentation	73	0,2	0,0	0	0,0	0,0
BulkDataPayloadId	40	0,2	0,0	0	0,0	0,0
MESHDATAKEY	1	0,0	0,0	0	0,0	0,0
Total	3415	9,9	568,9	24	0,1	0,0

Merge Actors

Merge Method
Merge

Merge the source actors components to generate a single mesh. No simplification pass is performed. Will generate a single static mesh & optionally bake down textures.

Mesh Components to be incorporated in the merge: 4

- ☒ StaticMeshActor_8 - flower_05_05 - StaticMeshComponent0
- ☒ StaticMeshActor_2 - flower_01_01 - StaticMeshComponent0
- ☒ StaticMeshActor_6 - flower_02_03 - StaticMeshComponent0
- ☒ StaticMeshActor_4 - flower_05_02 - StaticMeshComponent0

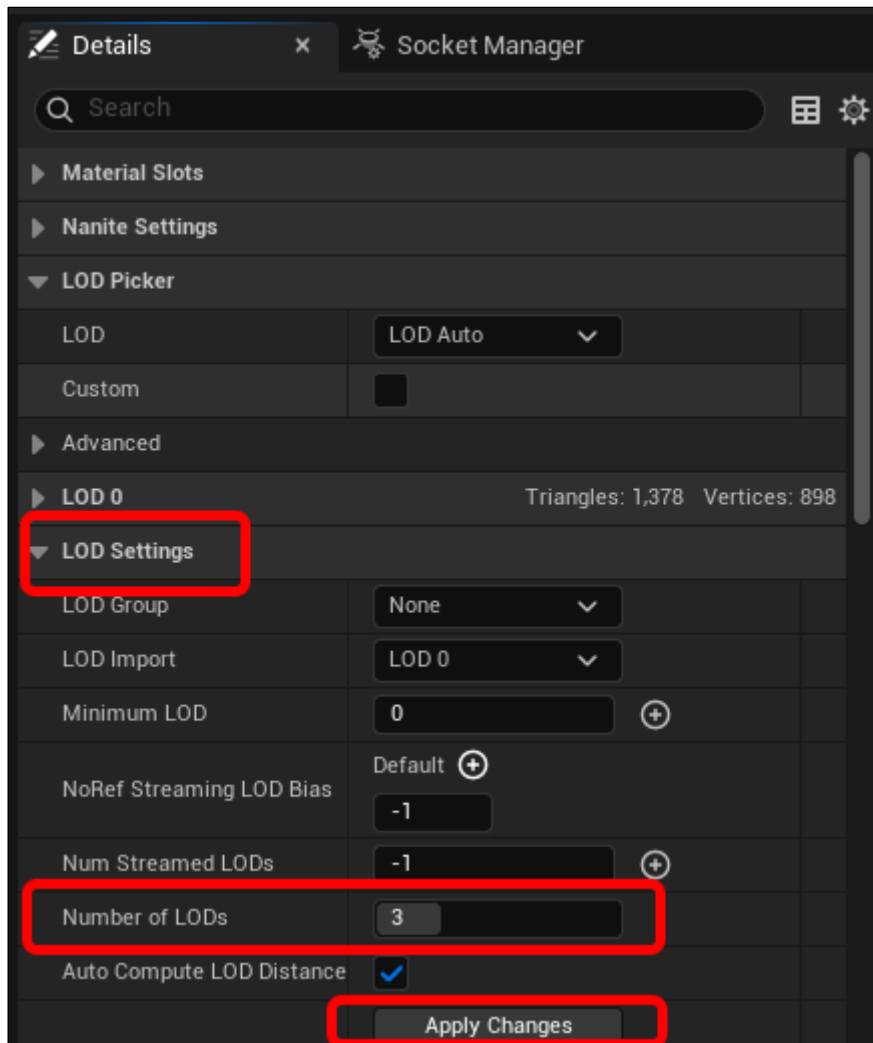
Merge Settings

Settings

- Generate Lightmap UV ☒
- Target Lightmap Resolution 256
- Computed Lightmap Resolution ☐
- Pivot Point at Zero ☐
- Merge Physics Data ☒
- Merge Mesh Sockets ☐
- Merge Materials ☐
- Material Settings
 - Gutter Size 2
 - Bake Vertex Data to Mesh ☐
 - Output UVs 8 Array elements
 - LOD Selection Type Use all LOD leve
 - Specific LOD 0
 - Use Vertex Data for Baking Material ☒
 - Use Texture Binning ☐
 - Reuse Mesh Lightmap UVs ☒

☐ Replace Source Actors

Merge Actors



Name	Duration (ms)
Scene	25,96
ShadowDepths	15,08
RenderVirtualShadowMaps(Nanite)	14,95

