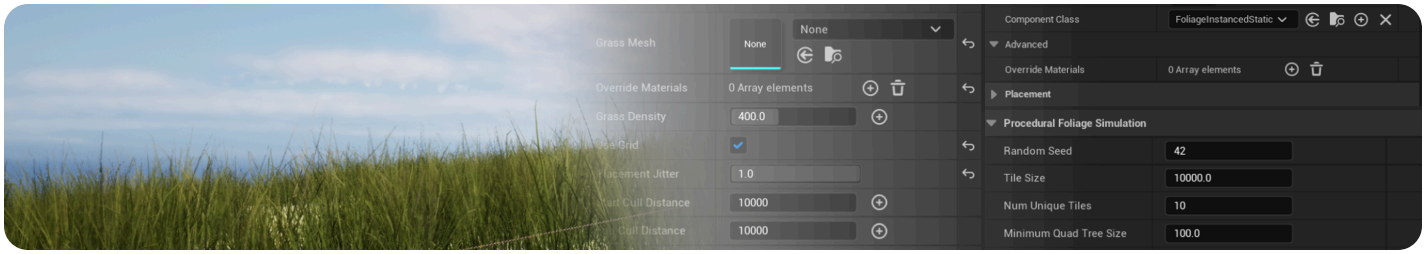
Open World Tools Property Reference

A listing of properties and descriptions for the Open World tools.

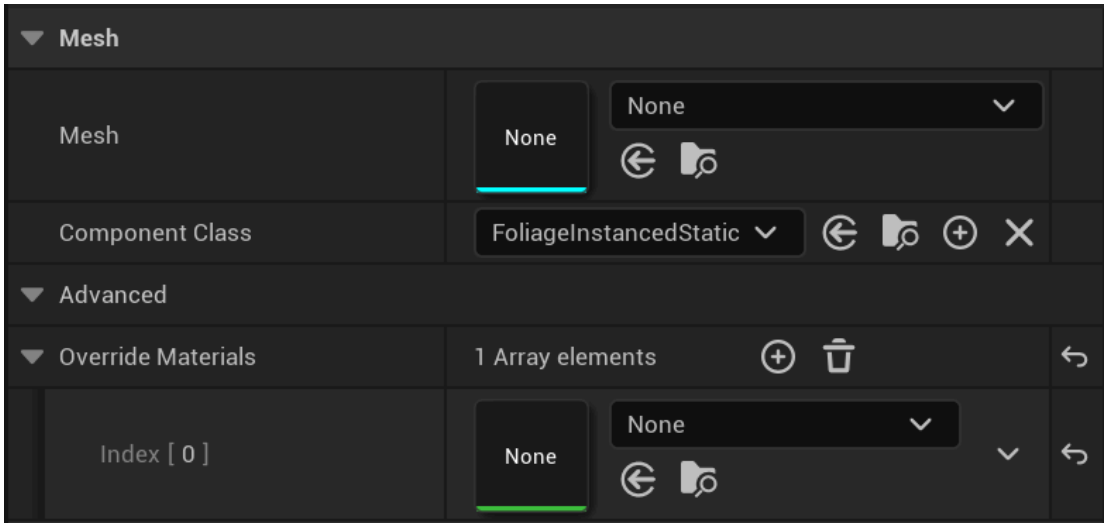


Overview

This page contains a reference listing of properties you will find while working with the Open World Tools.

Foliage Type

Mesh



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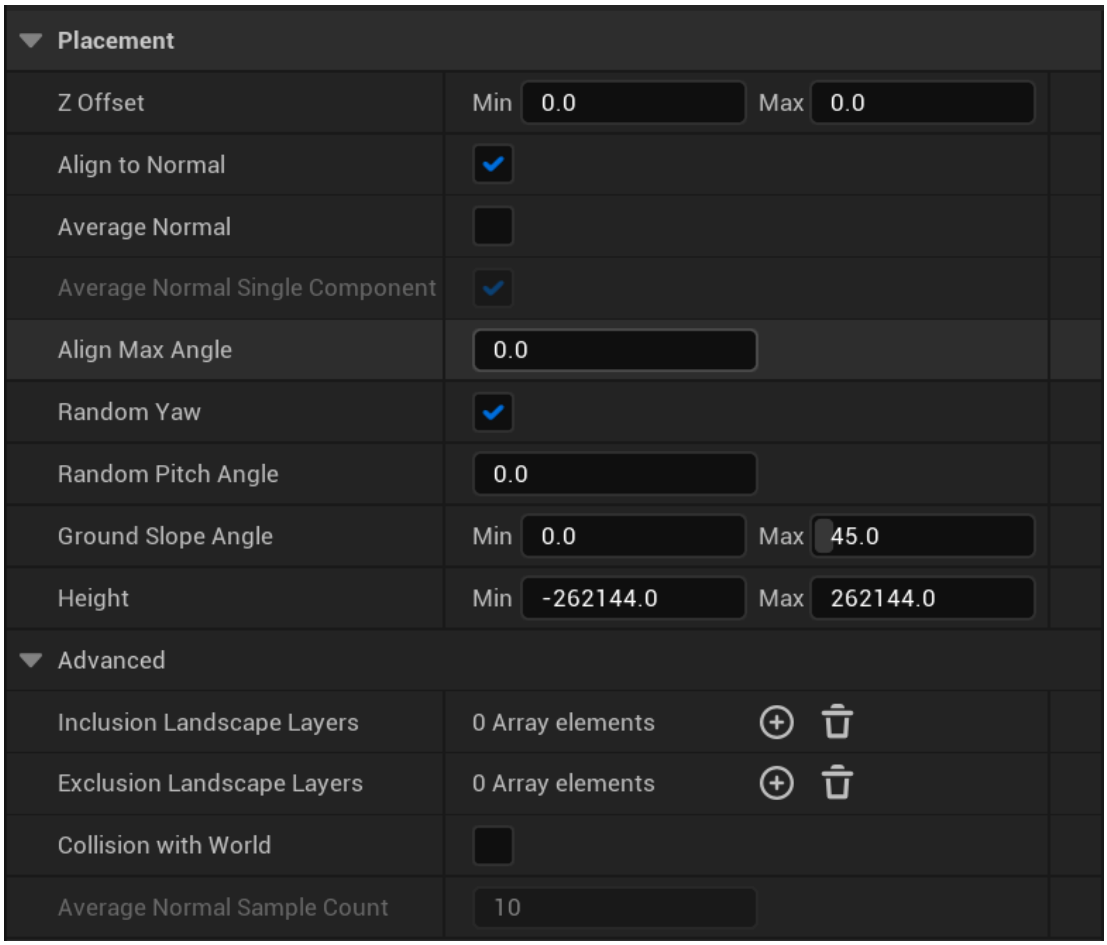
Property	Description
Mesh	Defines which Static Mesh will be used.
Component Class	The component class to use for foliage instances. You can make a Blueprint subclass of FoliagedInstancedStaticMeshComponent to implement custom behavior and assign that class here.
Override Materials	Material overrides for foliage instances.

Placement



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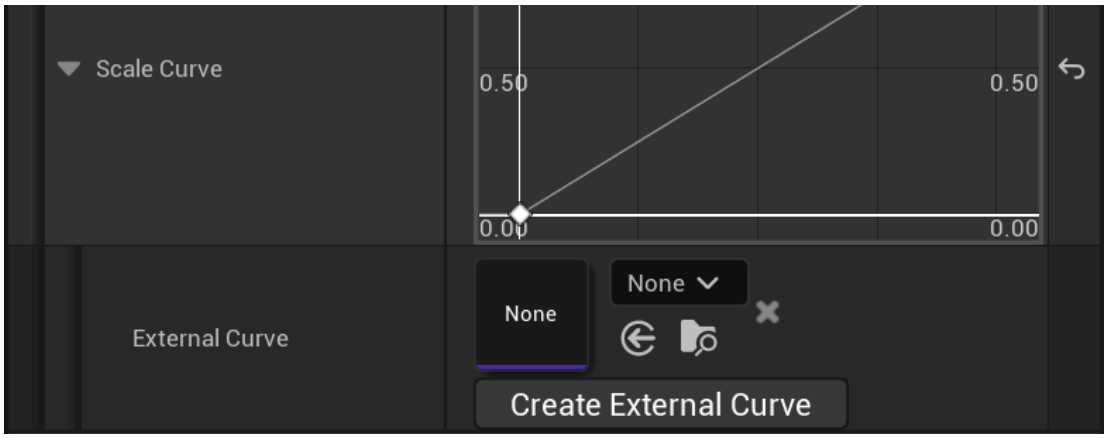
Property	Description
Z Offset	Specifies a range from minimum to maximum of the offset to apply to a foliage instance's Z location.
Align to Normal	Whether foliage instances should have their angle adjusted away from vertical to match the normal of the surface they're painted on. If AlighnToNormal is enabled and RandowYaw is disabled, the instance will be rotated so that the +X axis points down-slope.
Random Yaw	If selected, foliage instances will have a random yaw rotation around their vertical axis applied.
Random Pitch Angle	A random pitch adjustment can be applied to each instance, up to the specified angle in degrees, from the original vertical.

Property	Description
Ground Slope Angle	Foliage instances will only be placed on surfaces sloping in the specified angle range from the horizontal.
Height	The valid altitude range where foliage instances will be placed, specified using minimum and maximum world coordinate Z values.
Landscape Layers	If a layer name is specified, painting on Landscape will limit the foliage to areas of Landscape with the specified layer painted.
Collision with World	If checked, an overlap test with existing world geometry is performed before each instance is placed.

Procedural


Procedural
Density Falloff
Use Falloff Curve
Falloff Curve
0.00
0.50
1.00
1.00
0.50
0.00
External Curve
None
None
Create External Curve
Collision
Collision Radius
100.0
Shade Radius
100.0
Clustering
Num Steps
3
Initial Seed Density
1.0
Average Spread Distance
50.0
Spread Variance
150.0
Seeds Per Step
3
Distribution Seed
0
Max Initial Seed Offset
0.0
Growth
Can Grow in Shade
Spawns in Shade
Max Initial Age
0.0
Max Age
10.0
Overlap Priority
0.0
Procedural Scale
Min
1.0
Max
3.0
0.00
0.25
0.50
0.75
1.00



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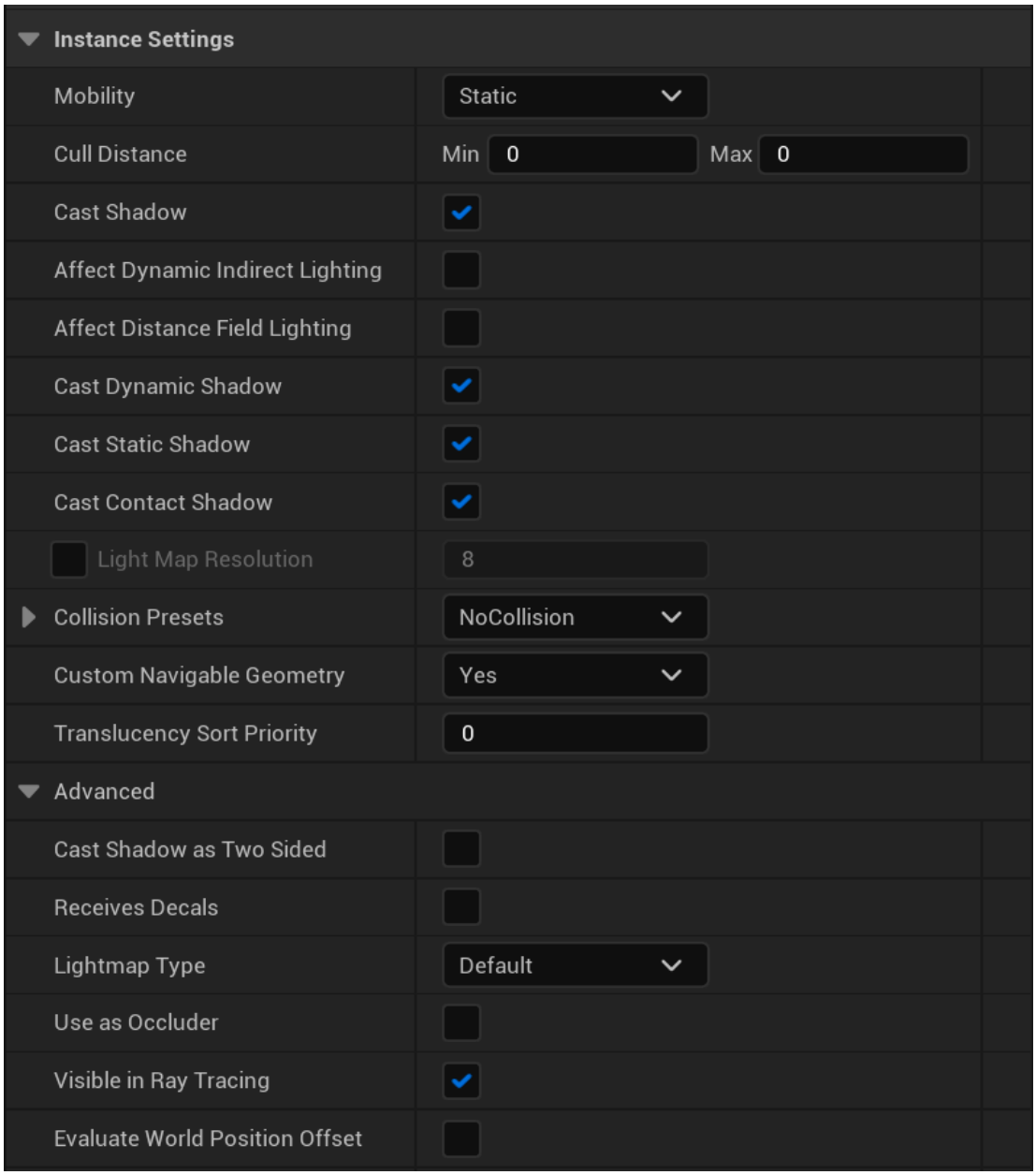
Property	Description
Collision Radius	The CollisionRadius determines when two instances overlap. When two instances overlap a winner will be picked based on rules and priority.
Shade Radius	The ShadeRadius determines when two instances overlap. If an instance can grow in the shade this radius is ignored.
Num Steps	The number of times we age the species and spread its seeds.
Initial Seed Density	Specifies the number of seeds to populate along 10 meters. The number is implicitly squared to cover a 10m x 10m area.
Average Spread Distance	The average distance between the spreading instance and its seeds. For example, a tree with an AverageSpreadDistance 10 will ensure the average distance between the tree and its seeds is 10cm.
Spread Variance	Specifies how much seed distance varies from the average. For example, a tree with an AverageSpreadDistance 10 and a SpreadVariance 1 will produce seeds with an average distance of 10cm plus or minus 1cm.
Seeds Per Step	The number of seeds an instance will spread in a single step of the simulation.

Property	Description
Distribution Seed	The seed that determines placement of initial seeds.
Can Grow in Shade	If true, seeds of this type will ignore shade radius overlap tests with other types.
Spawns in Shade	Whether new seeds are spawned exclusively in shade. Occurs in a second pass after all types that do not spawn in shade have been simulated. Only valid when CanGrowInShade is true.
Max Initial Age	Allows a new seed to be older than 0 when created. New seed will be randomly assigned an age in the range[0,MaxInitialAge].
Max Age	Specifies the oldest a seed can be. After reaching this age the instance will still spread seeds, but will not get any older.
Overlap Priority	When two instances overlap we must determine which instance to remove. The instance with a lower OverlapPriority will be removed. In the case where OverlapPriority is the same regular simulation rules apply.
Procedural Scale	The scale range of this type when being procedurally generated. Configured with the Scale Curve.
Scale Curve	Instance scale factor as a function of normalized age(i.e. Current Age / Max Age). X = 0 corresponds to Age = 0, X = 1 corresponds to Age = Max Age. Y = 0 corresponds to Min Scale, Y = 1 corresponds to Max Scale.
External Curve	For and external curve.

Instance Settings



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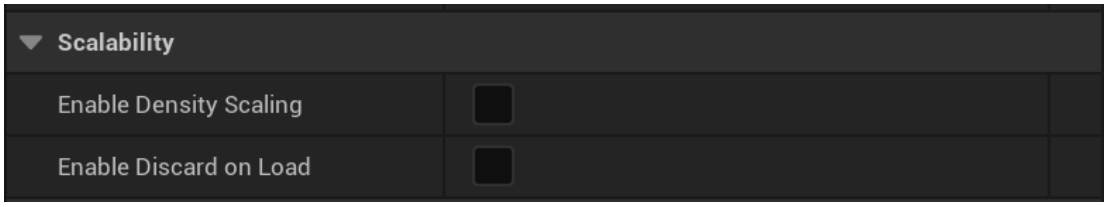
Property	Description
Mobility	Mobility property to apply to foliage components.
Cull Distance	The distance where instances will begin to fade out if using a PerInstanceFadeAmount Material node. 0 disables. When the entire cluster is beyond this distance, the cluster is completely culled and not rendered at all.
Cast Shadow	Controls whether the foliage should cast a shadow or not.

Property	Description
Affect Dynamic Indirect Lighting	Controls whether the foliage should inject light into the Light Propagation Volume. This flag is only used if CastShadow is true.
Affect Distance Field Lighting	Controls whether the primitive should affect dynamic distance field lighting methods. This flag is only used if CastShadow is true.
Cast Dynamic Shadow	Controls whether the foliage should cast shadows in the case of non precomputed shadowing. This flag is only used if CastShadow is true.
Cast Static Shadow	Whether the foliage should cast a static shadow from shadow casting lights. This flag is only used if CastShadow is true.
Light Map Resolution	Overrides the lightmap resolution defined in the static mesh.
Collision Presets	Select collision presets. You can set this data in Project Settings.
Custom Navigable Geometry	• **No**: Primitive doesn't have custom navigation geometry, if collision is enabled then its convex/trimesh collision will be used for generating the navmesh. • **Yes**: If primitive would affect navmesh, DoCustomNavigableGeometryExport() should be called to export this primitive's navigable geometry • **Even if not Collidable**: DoCustomNavigableGeometryExport() should be called even if the mesh is non-collidable and wouldn't normally affect the navmesh • **Dont Export**: Don't export navigable geometry even if primitive is relevant for navigation (can still add modifiers).

Property	Description
Cast Shadow as Two Sided	Whether this foliage should cast dynamic shadows as if it were a two sided material.
Receives Decals	Whether the foliage receives decals.
Use as Occluder	If enabled, foliage will render a pre-pass which allows it to occlude other primitive, and also allows it to correctly receive DBuffer decals. Enabling this setting may have a negative performance impact.

Scalability



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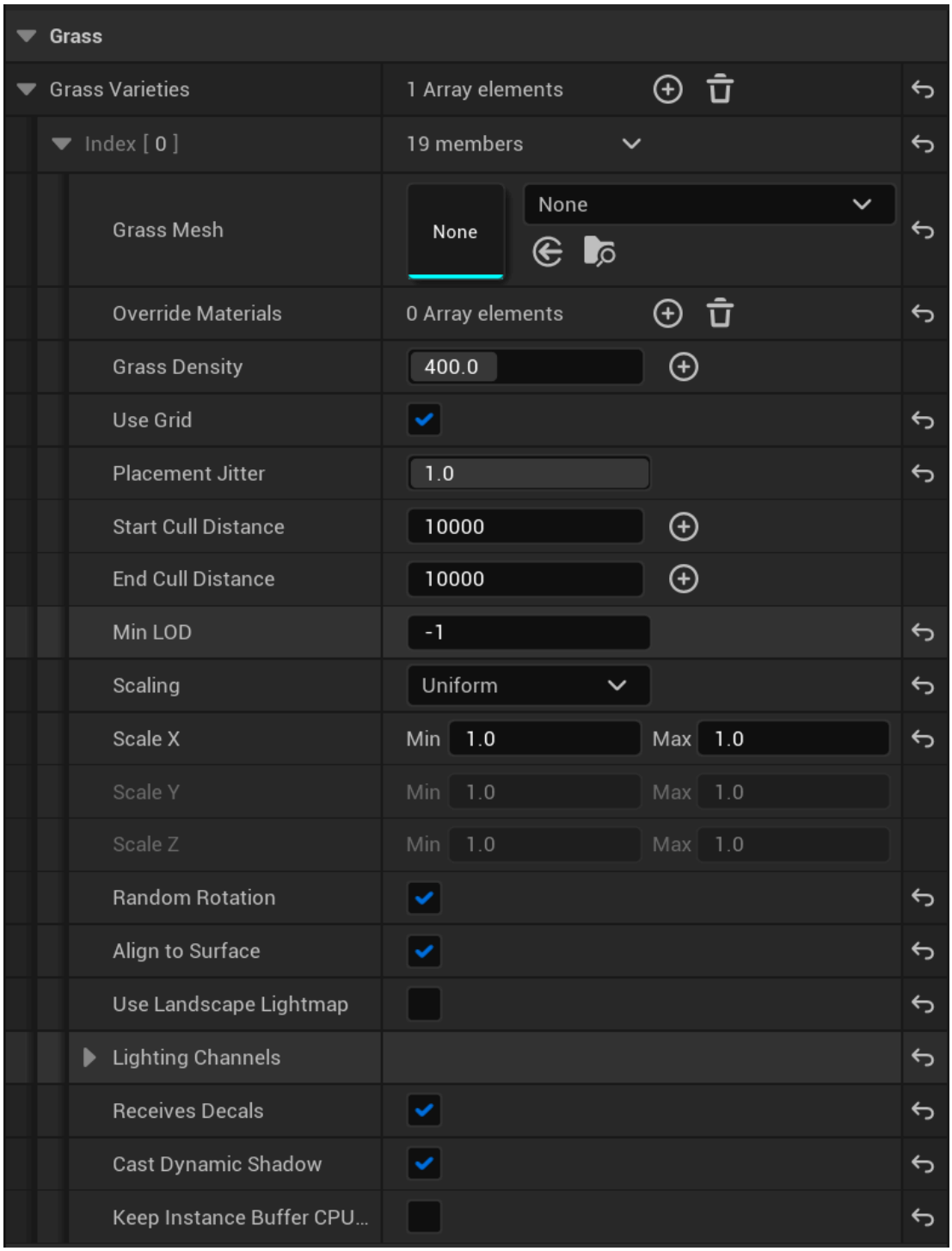
Property	Description
Enable Density Scaling	Whether this foliage type should be affected by the Engine Scalability system's Foliage scalability setting. Enable for detail meshes that don't really affect the game. Disable for anything important. Typically, this will be enabled for small meshes without collision(e.g. grass) and disabled for large meshes with collision (e.g. trees).

Landscape Grass Type

Grass Varieties



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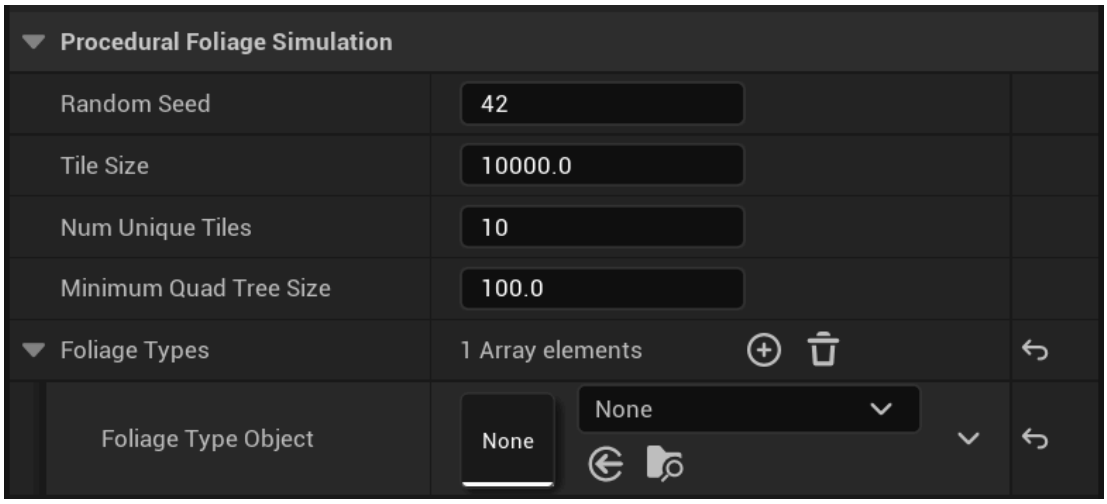
Property	Description
Grass Varieties	Grass Varieties.
Grass Mesh	Grass Mesh.

Property	Description
Use Grid	If true, use a jittered grid sequence for placement, otherwise use a halton sequence.
Placement Jitter	Placement Jitter.
Start Cull Distance	The distance where instances will begin to fade out using a PerInstanceFadeAmount material node. 0 disables.
End Cull Distance	The distance where instances will have completely faded out when using a PerInstanceFadeAmount material node. 0 disables. When the entire cluster is beyond this distance, the cluster is completely culled and not rendered at all.
Min LOD	Specifies the smallest LOD that will be used for this component. If -1(default), the MinLOD of the static mesh asset will be used instead.
Scaling	Specifies grass instance scaling type.
Scale X	Specifies the range of scale, from minimum to maximum, to apply to a grass instance's X Scale property.
Scale Y	Specifies the range of scale, from minimum to maximum, to apply to a grass instance's Y Scale property.
Scale Z	Specifies the range of scale, from minimum to maximum, to apply to a grass instance's Z Scale property.
Random Rotation	Whether the grass instances should be placed at random rotation (true) or all at the same rotation(false).
Align To Surface	Whether the grass instances should be tilted to the normal of the landscape(true), or always vertical(false).

Property	Description
Use Landscape Lightmap	Whether to use the landscape's lightmap when rendering the grass.

Procedural Foliage Spawner

Procedural Foliage Simulation



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Property	Description
Random Seed	The seed used for generating the randomness of the simulation.
Tile Size	Length of the tile (in cm) along one axis. The total area of the tile will be TileSize * TileSize.
Num Unique Tiles	The number of unique tiles to generate. The final simulation is a procedurally determined combination of the various unique tiles.
Foliage Types	The types of foliage to procedurally spawn.
Foliage Type Object	The foliage type that will be spawned by the procedural foliage simulation.