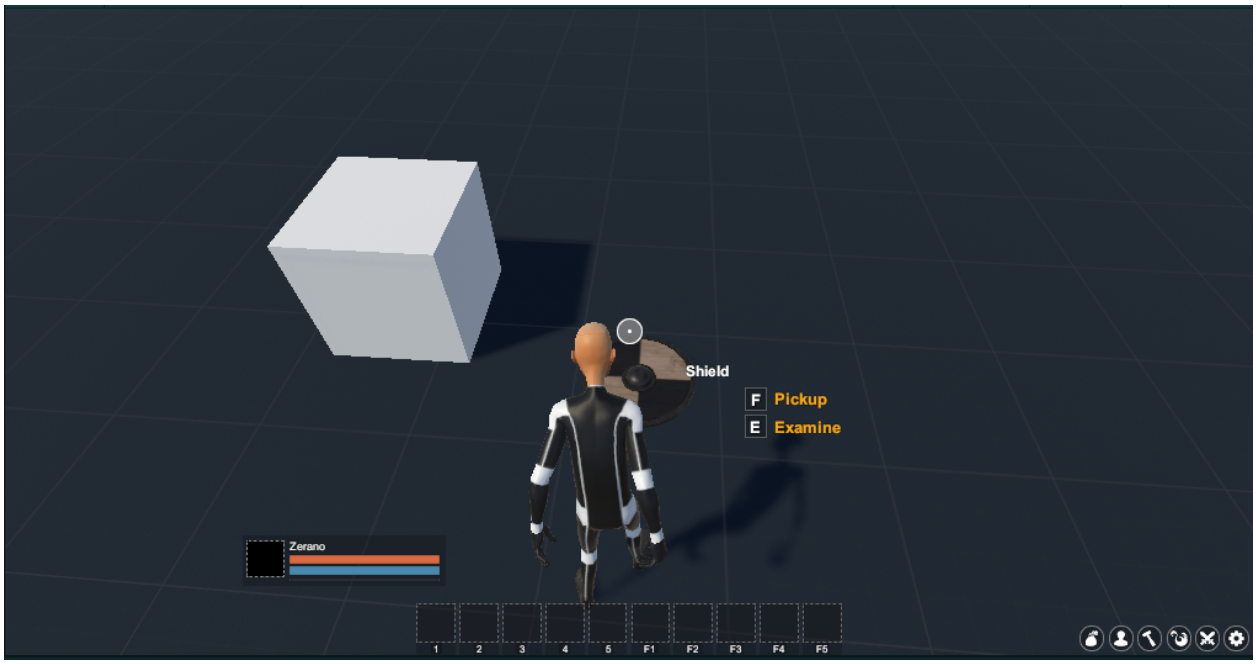
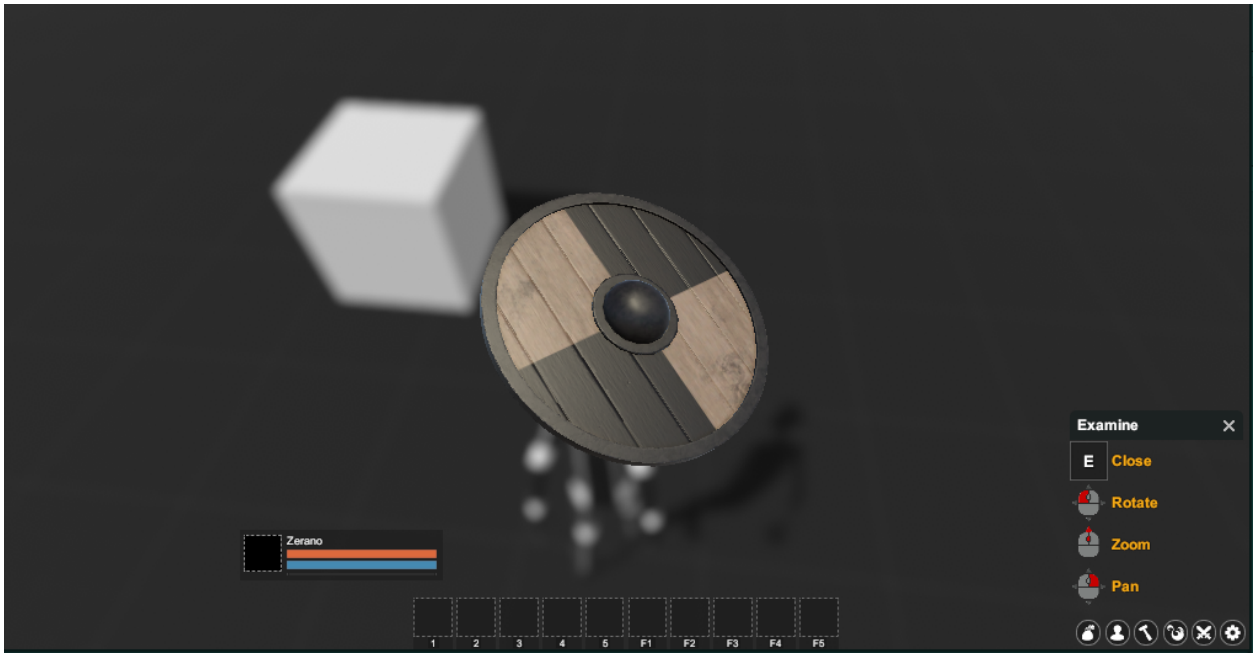
# Examine

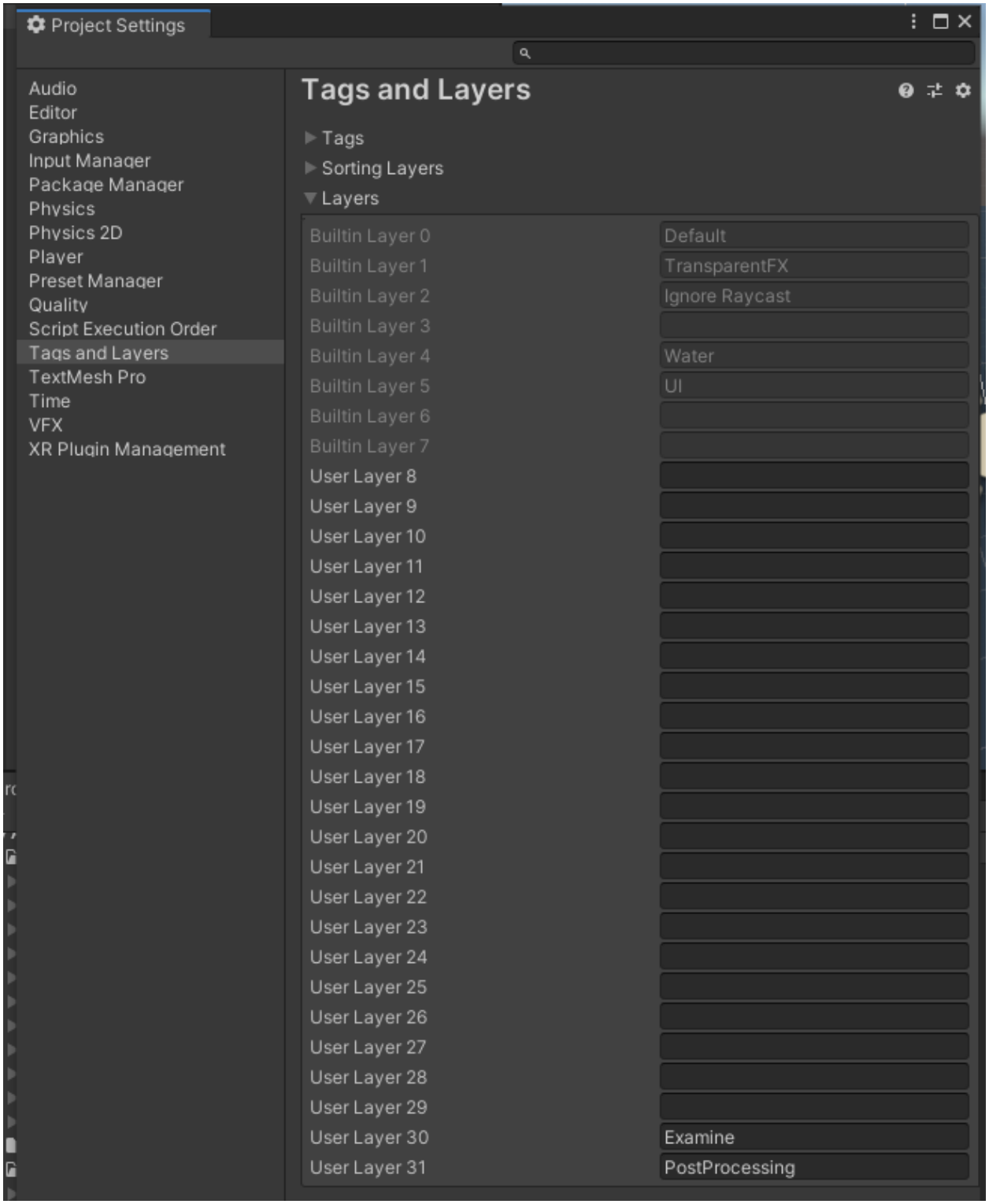
This feature adds the ability to pick up and examine items and allows the user to Rotate, Zoom and Pan the object. Optionally it is possible to blur the game view behind the object while the Examine window is open.



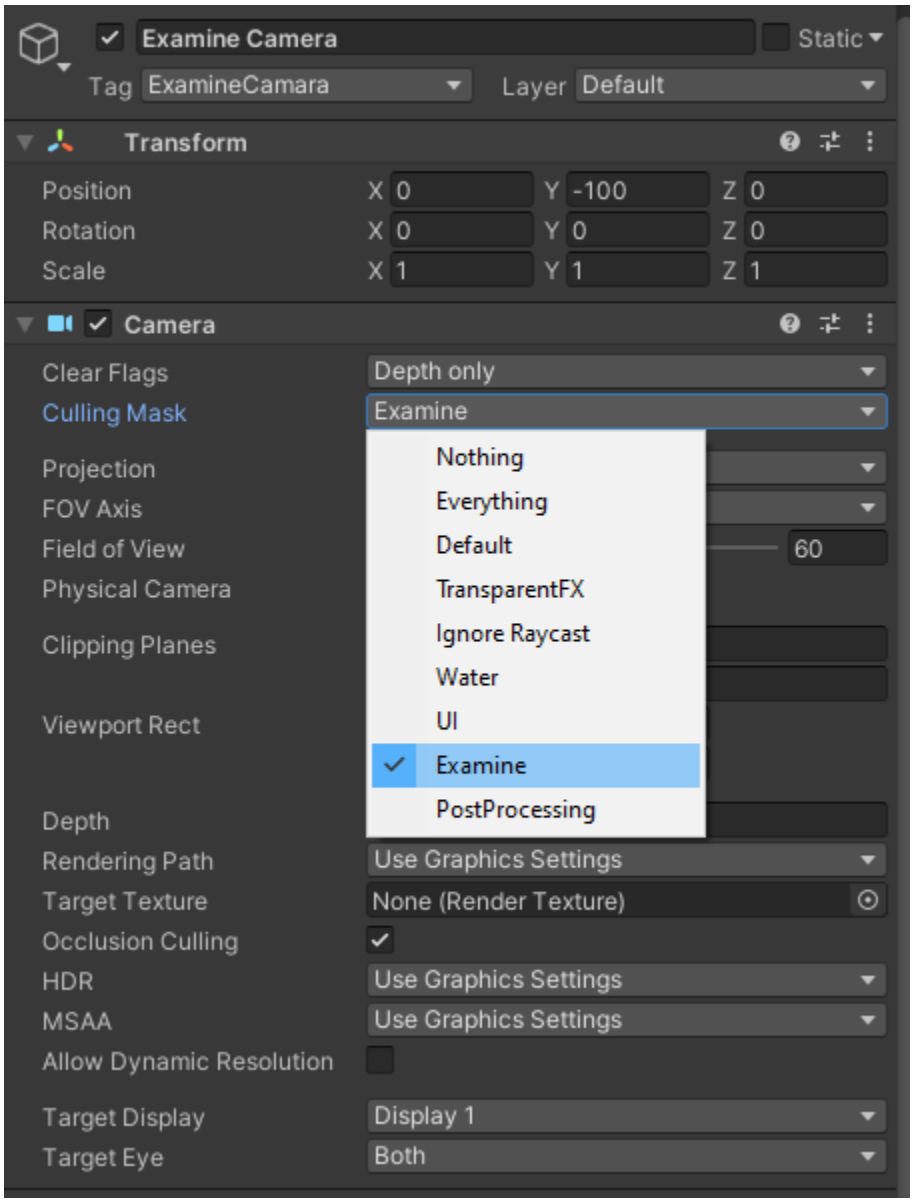
# Setting up the Examine scene

To enable the Examine scene to work it is necessary to add the layers Examine and PostProcessing as these are not saved by the asset export process.
Open Edit > Project Settings > Tags and Layers



Add the layers Examine and PostProcessing, It does not matter what number they are.

The ExamineCamara now need its Culling Mask set to Examine.
In the Hierarchy select the ExamineCamara and then from the Culling Mask dropdown just select Examine.




## How it works

The standard Trigger script has been extended to allow setting of a second trigger key. Also the Trigger Tooltip UI has been extended to display the second key.

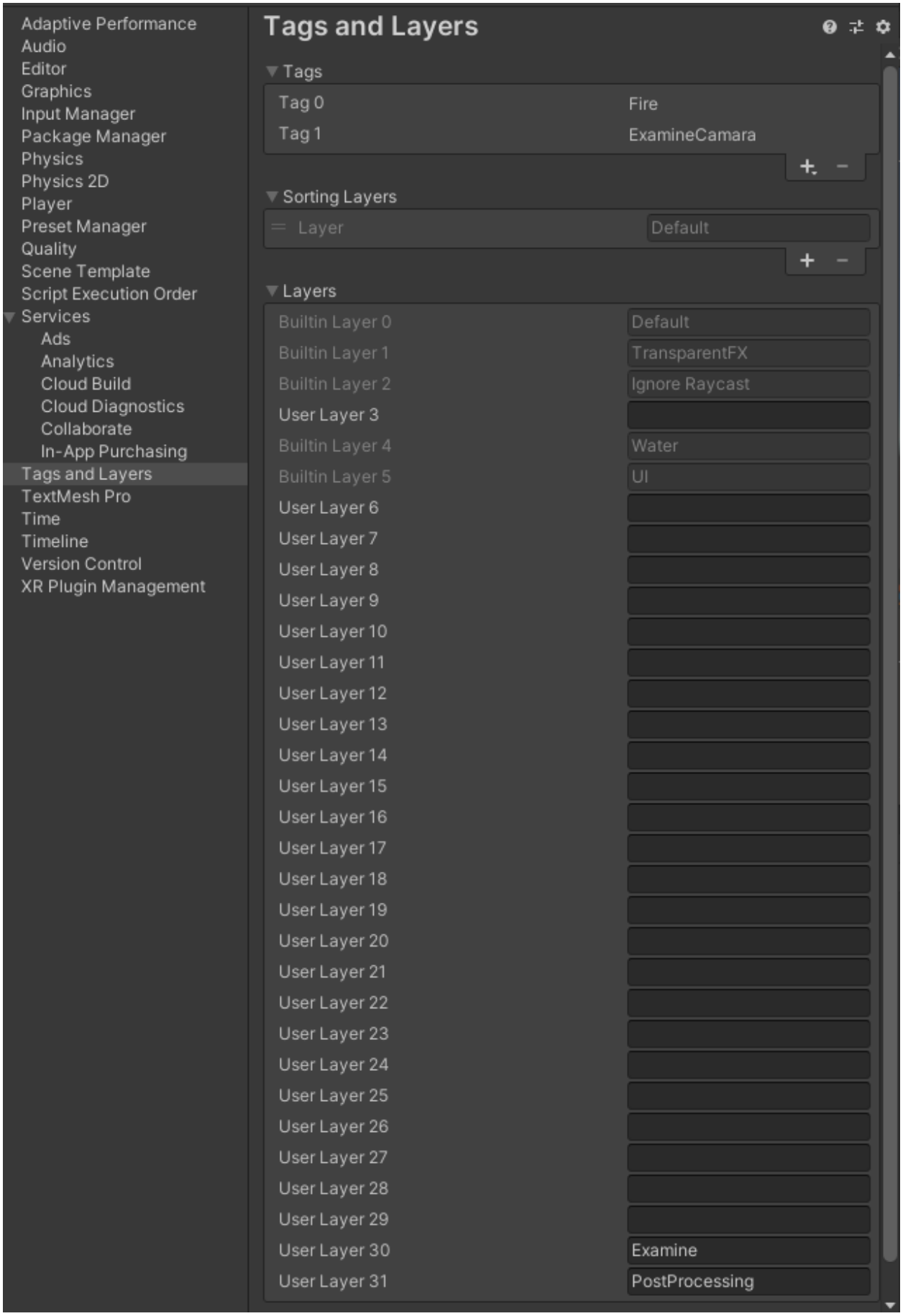
When the Examine key is pressed, the Examine Window is opened and the ExamineWindow script clones the targeted object. The clone is placed in front of the ExamineCamara and set to be on the Examine layer. As the ExamineCamara is set to only display objects on the Examine layer, this makes the cloned object appear in the foreground. At the same time, the ExamineVolume is enabled in the PostProcessing stack.
The main camera has the PostProcessing stack enabled, and it will now have the effects defined in the ExamineVolume applied. In the example, these are the ‘Depth Of Field’ to blur the image and the ‘Color Grading’ to make it black and white. It is possible to use the Examine effect without PostProcessing.
The Examine Window script also receives the mouse keys to control the Rotate, Zoom and Pan.

# Using Examine in your project

## Setup Layers and Tags

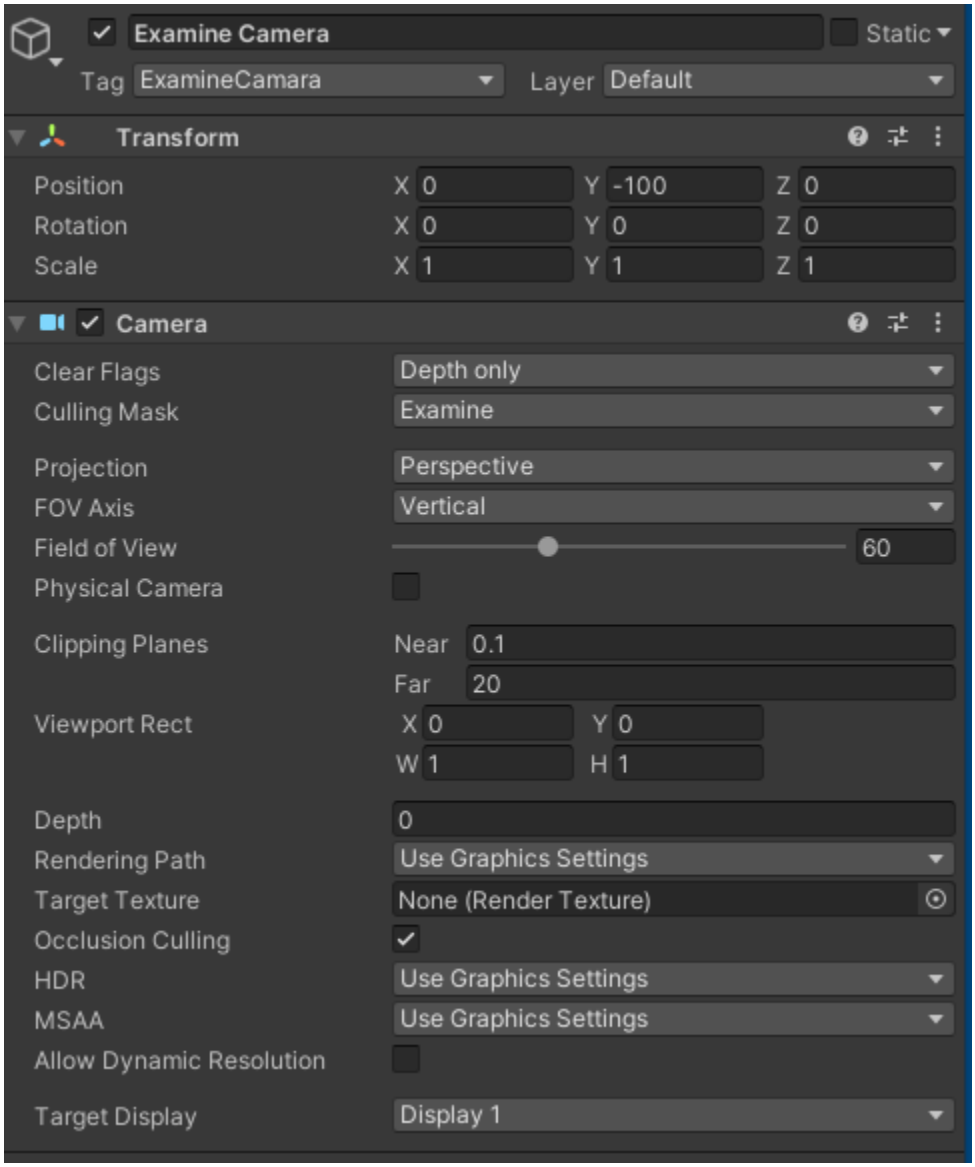
For the scripts to function correctly it is necessary to set up the tag ‘ExamineCamara’ and the Layers ‘Examine’ and ‘PostProcessing’.

Open Edit > Project Settings > Tags and Layers add the Tag and Layers


Adaptive Performance
Audio
Editor
Graphics
Input Manager
Package Manager
Physics
Physics 2D
Player
Preset Manager
Quality
Scene Template
Script Execution Order
Services
Ads
Analytics
Cloud Build
Cloud Diagnostics
Collaborate
In-App Purchasing
Tags and Layers
TextMesh Pro
Time
Timeline
Version Control
XR Plugin Management
Tags and Layers
Tags
Tag 0
Fire
Tag 1
ExamineCamara
Sorting Layers
Layer
Default
Layers
Builtin Layer 0
Default
Builtin Layer 1
TransparentFX
Builtin Layer 2
Ignore Raycast
User Layer 3
Builtin Layer 4
Water
Builtin Layer 5
UI
User Layer 6
User Layer 7
User Layer 8
User Layer 9
User Layer 10
User Layer 11
User Layer 12
User Layer 13
User Layer 14
User Layer 15
User Layer 16
User Layer 17
User Layer 18
User Layer 19
User Layer 20
User Layer 21
User Layer 22
User Layer 23
User Layer 24
User Layer 25
User Layer 26
User Layer 27
User Layer 28
User Layer 29
User Layer 30
Examine
User Layer 31
PostProcessing

## Setup Examine Camara

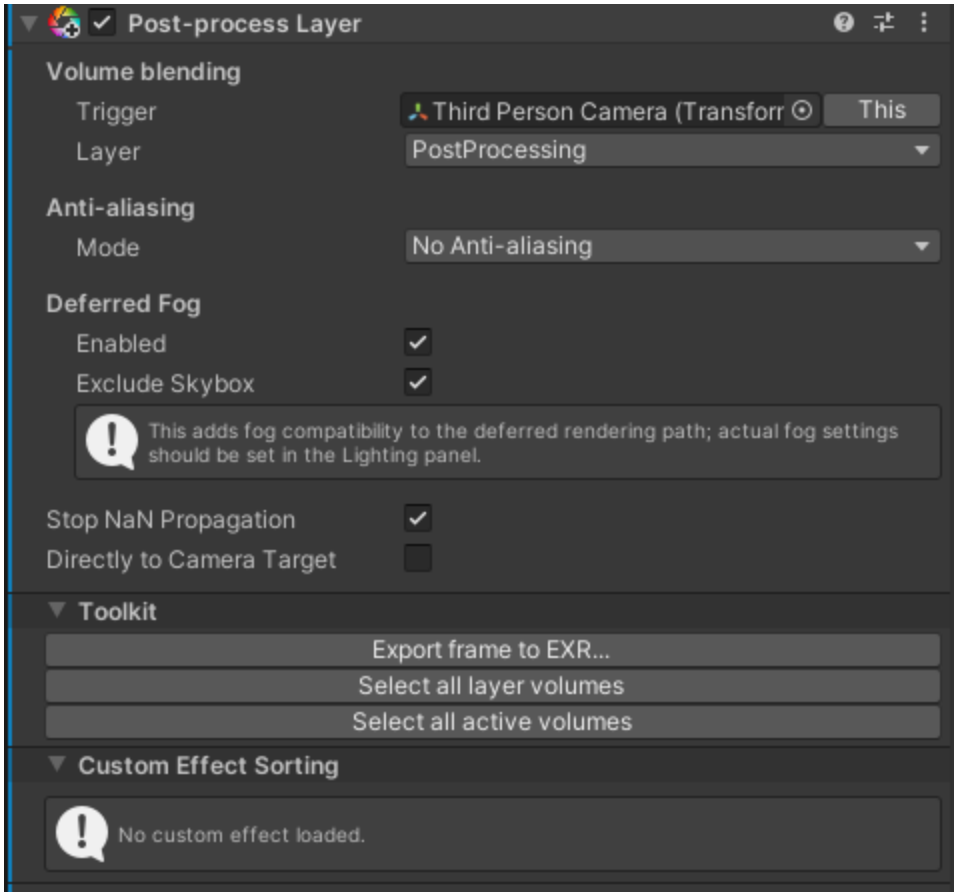
On the hierarchy create an empty gameObject called ExamineCamara. Set its tag to ExamineCamara.
Although the camara can be placed anywhere in world space I have found it useful to place it outside of the scene. In the example, I have set it to y=-100.
Add the camara component and set up as shown.



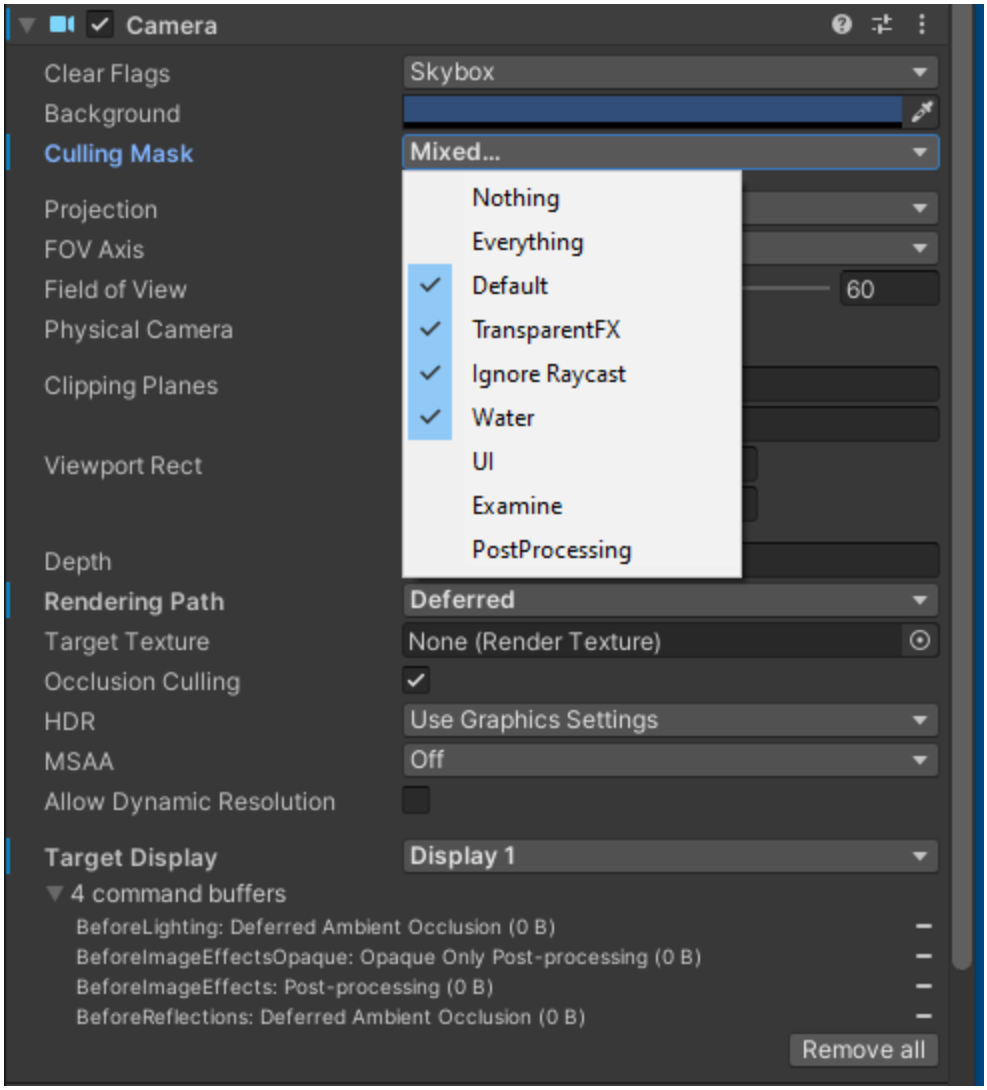

The Target Display should be the same as your Main Camara.

## Setup Main Camara

To enable PostProcessing (if required) some modifications are needed to the Main Camara.
Add the component Post-process Layer to the Main Camara gameObject (e.g. ‘Third Person Camara’) and set the Volume blending Triger and Layer as shown.




In the Camara component ensure the ‘Culling Mask’ does not include the Examine or PostProcessing Layers. Also, set the Rendering Path to deferred.




## Setup Examine UI

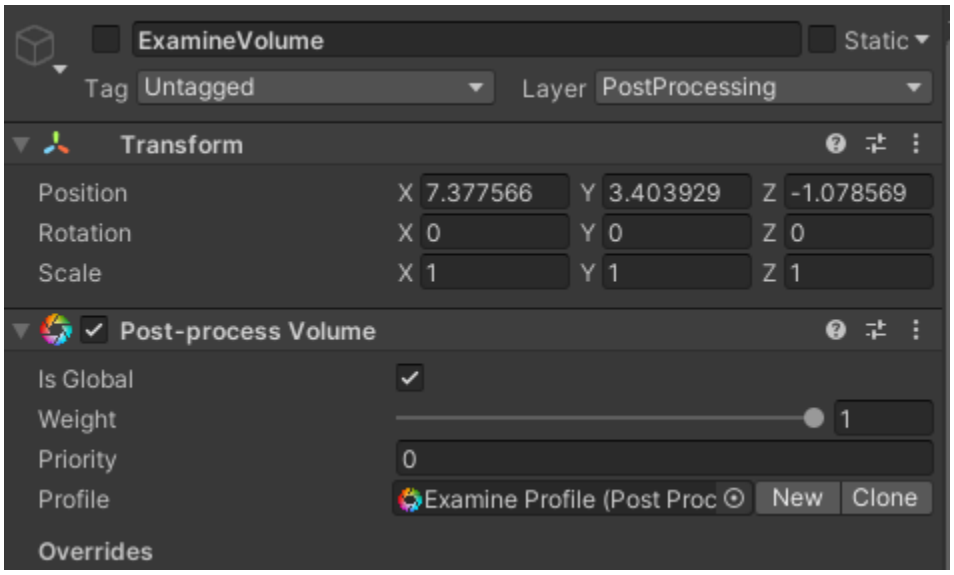
There are two UI elements for the Examine function, the prefabs ‘Examine Trigger Tooltip’ and the ‘Examine Window’. Both should be added to your existing UI.
The ‘Examine Trigger Tooltip’ automatically finds the keys configured in the ExamineTrigger so does not need editing.

The ‘Examine Window’ has a reference field for the PostProcessing Volume. This only has to be set if effects are required.
It also has settings for Rotation, Zoom and Pan speeds.

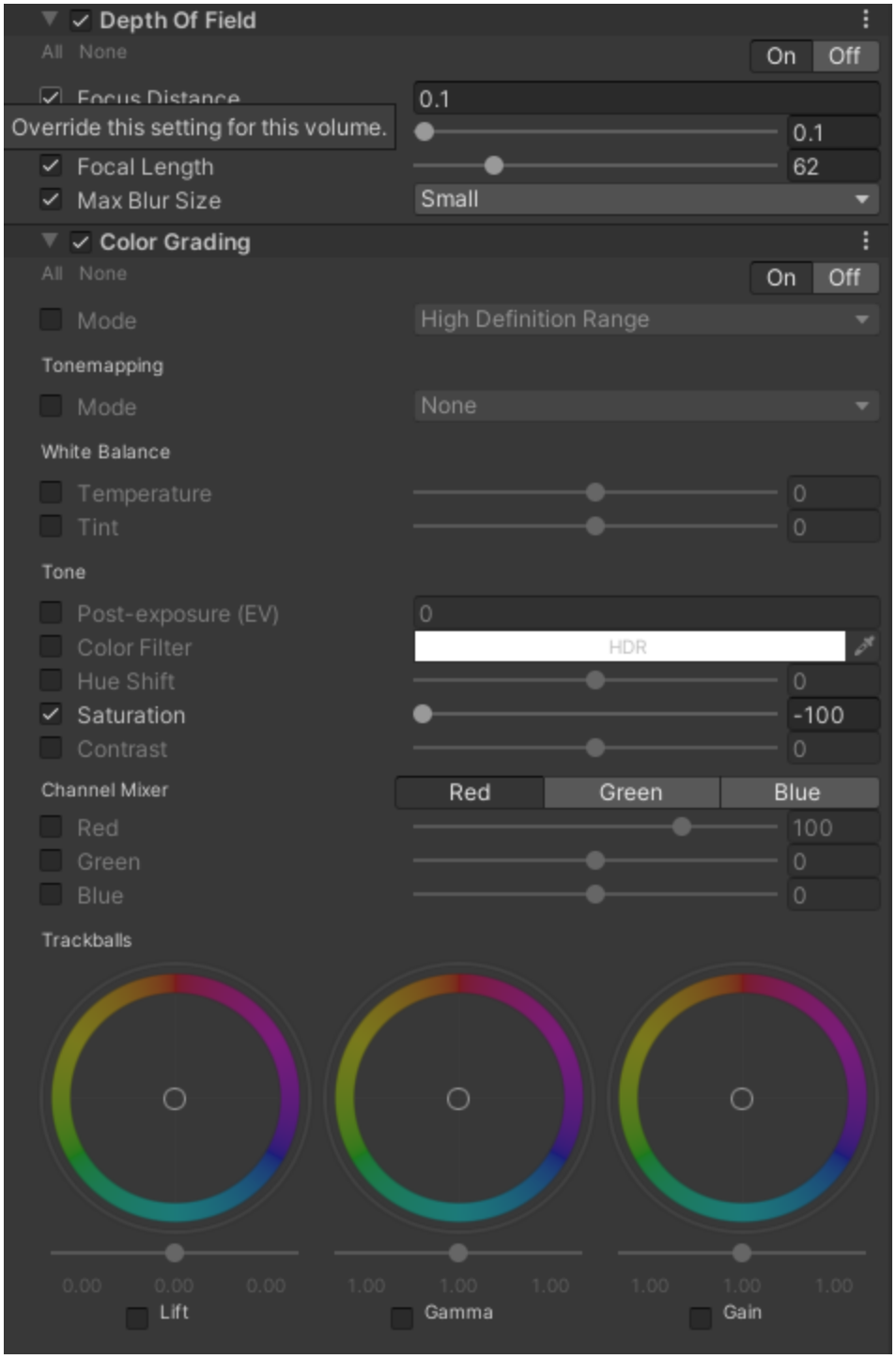
## Setup PostProcessing

This has been set up for the Built-In Pipeline, it has not been tested with URP and HDRP.

After installing the PostProcessing package, on the hierarchy create an empty gameObject, I suggest calling this ExamineVolume.
Ensure the ExamineVolume is disabled and add the component ‘Post-process Volume’. Set the check box ‘Is Global’ and set the Weight to 1 and then click New.



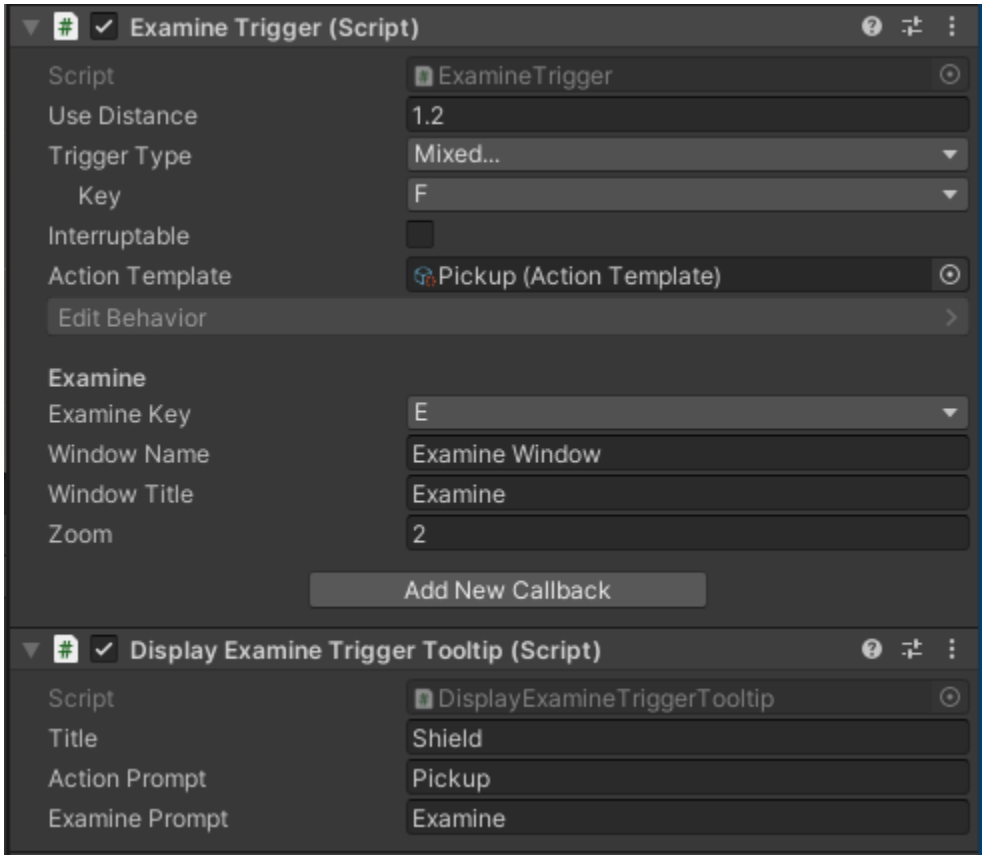

It is now possible to add the effects to be applied while the Examination window is open. In the example I added the following.




## Setup Item

Any item that uses the standard Trigger script can be converted to be viewable. To do this you need to remove the existing ‘Trigger’ and ‘Display Trigger Tooltip’ components and add the ‘Examine Trigger’ and ‘Dispaly Examine Trigger Tooltip’.

In the example, the Shield is set up as shown.




Currently the trigger type for Examine is only a key press.
The Zoom value is the initial zoom setting for the item.