

# Minimalist Bedroom Archviz

BY RAD-CODERS

This document will guide you thru the usage of this asset. It contains best practices and possible problems you may encounter.

If you have any further questions please feel free to contact us at:

<u>info@radcoders.co.za</u> OR

Andre: <a href="mailto:aschoultz@radcoders.co.za">aschoultz@radcoders.co.za</a>

# Quick Setup Guide





### **COLOR SPACE**

Please change your color space in the "Player Settings" from **Gamma** to **Linear**. For future cases set your color space to **Linear** before asset importing (to avoid reimporting).



### POST PROCESSING STACK (BY UNITY TECH.)

Please follow this link and import the Post Processing
Stack provided by Unity Tech. in the Unity Asset Store:
<a href="https://www.assetstore.unity3d.com/en/#!/content/8391">https://www.assetstore.unity3d.com/en/#!/content/8391</a>

2 . After import add the Post Processing component to your main camera and drag the provided("MinimalistPProfile.asset") profile into the open slot.



### **DEFERRED RENDERING PATH**

For all active cameras in the scene it is recommended to set your rendering path to **deferred**. This will allow you to use a few extra features in the post processing stack.

# General Usage: Navigation

### **TEXTURES**

All textures including HRD's are located here (Root-> Assets-> Textures). The texture name is followed by the map type and then resolution. Example:
CleanSteel(texture name)\_normal(map type)\_2k(resolution)

### **MODELS**

All .fbx files can be found here (Root> Assets-> Models). All models make
use of the standard material called
"NoName". We recommend using
prefabs instead.

### **MATERIALS**

All materials can be found here
(Root-> Assets-> Materials). The
materials follow the same filing
convention as their textures.

Materials are named by their texture
name followed by the
instance/variation of the material.

Example: CleanSteel(material
name)\_01(Instance/variation
number)

### **PREFABS**

All **prefabs** can be found here (Root-> Assets-> Prefabs). Each prefab follow the same filing and naming convention as its .fbx base file. All .fbx files in the "Models" folder has a prefab instance in the "Prefab" folder.



# General Usage: Navigation (Continued)

### **POST PROCESSING STACK**

All profiles including LUT's are located here (Root-> Assets-> PostProcessingStack). The profile located here uses the highest available settings to improve the visual quality of the asset. Please see the optimisations page for optimisation related questions.

### **SCENES**

All **scenes** can be found here (Root- > Scenes).



# Optimisation Methods

### WITHOUT COMPROMISING QUALITY



<b>▼Mixed Lighting</b> Baked Global Illur	<b>♂</b>		
Lighting Mode	Shadowmask		*)
Mixed lights provide realtime direct lighting. Indirect lighting gets baked into lightmaps and light probes.  Shadowmasks and light probes occlusion get generated for baked shadows. The Shadowmask Mode used at run time can be set in the Quality Settings panel.			
▼Lightmapping Settings			
Lightmapper	Enlighten		<b>‡</b>
Indirect Resolution	4	texels per un	it
Lightmap Resoluti	140	texels per un	it
Lightmap Padding	2	texels	
Lightmap Size	2048		<b>‡</b> ]
Compress Lightm	<b>✓</b>		
Ambient Occlusion			
Max Distance	1		
Indirect Contrib			1.19
Direct Contribu			0.9
Final Gather	<b>V</b>		

Post Effects

Lighting Setup

Textures

### POST EFFECTS

**OPTIMISATION METHOD** 

### **AMBIENT OCCLUSION**

This project is set up (baked) to not rely on post processed ambient occlusion. With that said it is still recommended to use AO in order to enhance the visual quality of the asset.

For best performance set AO "Sample Count" to "Lowest" and enable "Downsampling".

### SCREEN SPACE REFLECTIONS

Screen space reflections are compute heavy, but enhances the visual quality greatly. Disabling this should be one of the last resorts.

For best performance set "Reflection Quality" to "Low".

### ANTI ALIASING (QUALITY SETTINGS)

Please be sure to disable anti aliasing from the "Quality Settings" as it no longer serves any purpose.

### LIGHT SETUP

**OPTIMISATION METHOD** 

### LIGHTMAPPING SETTINGS

Here are a few parameters to decrease baked map sizes and essentially increase overall performance. A by product of this is faster baking times. These are some basic settings that has been tested to work with **this** asset.

For best performance set:

- Indirect Resolution to 2
- Lightmap Resolution to 80
- Final Gathering-> Ray Count to 120
- Lightmap Parameter to Default-Medium

### **REFLECTION PROBES**

Currently the scene uses 1k maps for reflections (both reflection probes and environment reflections). In this scene there aren't any large fully reflective objects (windows excluded) and you can get away with lower reflection quality.

For best performance set all reflection probe "Resolutions" to **512**. Set the "Environment Reflection" "Resolution" under the "Lighting" window to **512**.

### TEXTURE SETUP

**OPTIMISATION METHOD** 

### **TEXTURE IMPORT SETTINGS**

Most textures in this project uses a 1k (1024x1024) resolution. Although it looks beautiful it can also have some extra GPU overhead. We have tested the lowest resolution for all the textures and came across a pattern. The best rule of thumb would be to cut the current resolution in half. This will leave most textures with a 1k (512x512) resolution.

A large portion of the asset uses textures where it is used on a large object. Thus going lower than half might cause some unwanted imperfections. If the texture is only used on small objects the resolution can go down further than half.

For best performance change the "Max Size" of each texture under the import settings to half of its current resolution. So 1024 will become 512.

