

## **How to set up the vertex displacement shader:**

The vertex displacement shader is, in principle, the same as the regular URP shader you would use in your Unity project, only reconstructed and expanded. The setup is thus the same as with any other shader – create a material and assign the vertex displacement shader to it. Then assign the new material to your in-scene objects. That's it!

## **Shader options:**

### **Albedo Texture:**

The main (albedo/color) texture used by the shader.

### **Albedo Color:**

An additional color multiplied with the one already present in the albedo texture. Use this to further customize the look of your sprite.

### **Alpha Cutoff:**

This is a threshold value – all parts of the texture whose alpha-value is less than the alpha cutoff will not be rendered.

### **Normal Map:**

The normal map is used to simulate a 3D-surface by containing information on how the light should be reflected by the surface.

### **Normal Strength:**

This value is multiplied with the normal map and is used to make the effect stronger or weaker. A negative value will mirror the 3D-effect (i.e. protruding surfaces will now be concave, and vice versa).

### **Emission Map:**

A black-and-white map that determines which parts of the sprite will emit light. The white pixels of the texture are areas where the emission will have an effect, and the black pixels are the areas with no emission.

### **Emission Color:**

The emission color. As it is an HDR color, an RGB-value as well as an intensity can be specified. Keep in mind that **different post-processing effects** (most notably **bloom**) will have a profound effect on the look of your emission.

### **Emission Extra Intensity:**

Since the default HDR color has a limited intensity (-10 to 10), this shader offers an additional intensity option that allows you to make your emission even stronger.

### **Vertex Displacement Amount:**

The strength of the vertex displacement. Set to 0 is for no vertex displacement, above 100 for slightly noticeable vertex deformities, and above 1000 for easily noticeable, rough deformities in the sprite.

For further details, visit <https://docs.project-gamedev.com/vertex-displacement-shader/vertex-displacement-shader.html>.

Congratulations! You are now ready to use the shader!

In case you experience any problems with the shader, can't manage to set it up properly, or would simply like to propose an improvement, don't hesitate to contact us at [contact@project-gamedev.com](mailto:contact@project-gamedev.com), or fill out the form at <https://project-gamedev.com/contact.html>.

Best of luck with your game development journey!