

## **Bakery - GPU Lightmapper**

### Changelog

#### v1.1

- Added support for custom shaders (Meta Pass). Includes any procedural albedo and emission. Opacity maps are still taken by name.
- Added HDRP and LWRP support.
- Renderers with Cast Shadows = Off shouldn't produce shadows anymore.
- It's now possible to bake without any lights (emissive only).
- Added emissive boost option.
- Light Mesh can be now synchronized with built-in area lights.
- Added "clear baked data" menu item.
- Fixed static batching in editor.
- Fixed artifacts with negative parent scale.
- Fixed emission being baked in lightmaps.
- Fixed emission intensity.
- Fixed "type mismatch" error sometimes when baking a lightmap with no lights affecting it.
- Fixed various problems with GI VRAM optimization.
- Fixed lightmap array growing too long when multiple scenes are baked.
- Fixed console warnings on export.
- Fixed terrains being baked even if not marked static.
- UV GBuffer export now happens after scene unload to prevent some out-of-memory crashes.
- Fixed being unable to select "Everything" for bitmasks in some components.
- Fixed undo not recording "match real-time to lightmapped" buttons on light components.
- Fixed rare crash during meta pass rendering
- Fixed GI VRAM optimization algorithm (proper shader used, removed arbitrary 2x multiply)

#### v1.2

- Added Shadowmask
- Added optional ambient occlusion
- Added Backface GI option for translucent surfaces
- Fixed error when baking a scene with missing materials
- Fixed incorrect opacity from built-in trees
- Fixed reflection probes trying to re-render scenes with built-in lightmappers
- Added out-of-bounds UV check
- Fixed "you need to mark objects static" error sometimes happening when rendering probes
- Fixed rendering probes before lightmaps
- Fixed vertex lightmaps sometimes darkening regular lightmaps
- Fixed vertex lightmaps incorrectly rendering meta pass
- Static objects with Scale In Lightmap = 0 now affect GI
- Less memory is allocated during export
- Fixed export crash on large projects
- Fixed remaining problems with negative scale
- Fixed a bug when sometimes loaded scene at runtime didn't have lightmaps applied
- Fixed sometimes generating "debugAlpha" files in the project folder

### v1.3

- Added LOD support
- Added non-physical Indirect Intensity option for lights
- Improved shadow leak prevention algorithm
- You can now disable Point Light shadows by setting Samples to 0
- Added option to control minimum lightmap size in UI
- Added option to let Unity generate occlusion probes
- Improved packing for Lightmap groups with Pack Atlas mode
- Seam fixing step doesn't take too long to process terrains anymore
- Lightmap Group Selector components using Pack Atlas mode don't need to be added on every child object anymore
- Optimized area light sampling algorithm
- Seam fixer is now 64-bit, allowing it to handle larger scenes
- Fixed duplicated lightmap IDs
- Fixed incorrect shadowmask when many lights were overlapping
- Fixed bicubic filtering not working correctly for encoded lightmaps
- Fixed incorrect light probe positioning when LightProbeGroup is a part of complex transformed hierarchy
- Fixed real-time physical falloff acting incorrectly in deferred
- Fixed real-time physical falloff not working on Unity 2018
- Fixed shadowmask baking artifacts on shadowed faces
- Fixed crash sometimes happening during alpha buffer export
- Fixed errors when trying to bake models with 32-bit index format
- Fixed light probe render making objects red in 2017.3
- Fixed area lights looking pink in light probes
- Fixed incorrect light cookie rendering with very low resolution cookies
- Fixed textured area lights leaking memory during scene export and reduced their disk usage
- Fixed cases where models synced via version control could reimport multiple times due to UV adjustment

### v1.4

- Added 4 directional modes making Bakery lightmaps compatible with normal maps and specular:
  - \* Spherical Harmonics (SH): high quality, based on Frostbite technique.
  - \* Radiosity Normal Mapping (RNM): medium quality, based on Half-Life 2 technique.
  - \* Dominant Direction: just like built-in, compatible with existing Unity shaders.
  - \* Baked Normal Maps: allows to simply bake the normal map effect into regular lightmaps. It is possible to customize Meta Pass in your shader to output procedural normals.
- New Bakery shader with full support for new lightmapping modes and vertex bake. Not required for standard color/directional/mask lightmaps.
- New HDRP Bakery shader with support for SH.
- New LWRP Bakery shader with support for SH and RNM.

- Vertex lightmaps now support Shadowmask, directional and SH lightmaps (requires Bakery shader or tweaks to your own)
- You can set different resolution for color/shadowmask/directional lightmaps
- UVs in automatic atlases are now scaled up to fill up empty space
- Improved packing using both manual Lightmap Groups and auto-atlasing
- Fixed reflection probes not being saved when no LightingDataAsset was assigned to a scene
- Fixed half-empty atlases generated for LODs
- Fixed shadowmask breaking on some objects after "Render Selected Groups"
- Fixed using Area Light + Light Mesh + texture on one object
- Fixed not respecting "Scale in Lightmap" option on terrains
- Fixed manual lightmap groups not working properly for terrains
- Fixed not detecting overlaps in models without UV2 and subsequently not packing them correctly
- Fixed meta pass multimaterial support
- Fixed render settings not always being taken from the active scene (thanks E-Cone)
- Fixed UV padding adjustment not being applied to objects using manual Lightmap Groups
- Fixed light probe render getting stuck when Occlusion Probes is on and real-time reflection probes are off in quality settings
- Fixed some models getting reimported for no apparent reason
- Fixed light probes not receiving lighting from LODs
- Fixed crash during GI calculation when there were many area lights in the scene
- Fixed rare crash when compressed UVGBuffer texture was larger than uncompressed

#### v1.45

- Added checker preview to analyze texel sizes and packing before baking.
- Added Lightmapped Prefab component.
- Added double-sided option to Bakery shader.
- Added option to mix Bakery lightmaps and Enlighten real-time GI (thanks TheXiexe).
- Fixed various problems with version control.
- Fixed errors in light probe calculation, they should now have proper contrast/saturation/directionality.
- Fixed banding artifacts on point light shadows.
- Fixed noise sometimes appearing in shadows and slightly improved leak prevention.
- When assigning channels to shadowmasks, bitmasks are now respected, meaning you can have > 4 overlapping shadowmasked lights if they use a different bitmask.
- Fixed bitmask being reset on lights when selecting multiple lights with different values.
- Denoiser library is upgraded to prevent driver crashes after recent Win10 updates.
- Added option to produce separate atlases for every scene in a multi-scene setup.
- Multi-scene bakes no longer store references to all lightmaps in every scene, and runtime scene unloading is now properly handled.
- Material.MaterialGlobalIlluminationFlags are now respected.
- Unnecessary data (like bake settings) is now stripped from builds.
- All error messages are now more descriptive.
- Fixed incorrect overlap detection for models with custom UVs.

- Removed cross-dependencies from code to allow scene distribution with only a minimal set of scripts.
- Removed tonemapping from Sponza examples to prevent missing references to the old postprocessing system.

### v1.5

- Terrains now have fast dedicated ray tracing code, allowing for large detailed landscapes with modest baking time/memory footprint.
- Added global Indirect Boost option.
- Added option to remove bright edges around shadows sometimes caused by the denoising neural net.
- Render settings can be saved to prefabs and loaded back.
- HDRP shader was updated to work with 4.6.0.
- Painted Terrain Trees now can cast shadows and GI.
- Added option to store lightmaps in a folder named as the scene.
- Bakery can be now moved into subfolders
- "Update skybox probe" now properly refreshes the specular probe as well.
- Added last bake time indicator to main window.
- Baking times are now additionally printed to bakery\_times.log.
- Added option to play a sound when the bake is finished.
- Transparent submeshes without a texture and with alpha < 0.5 will not cast shadows anymore. Useful for e.g. parts of meshes being made of glass.
- Light probes now always have matching sky lighting to the first Skylight component in the scene.
- Fixed IES converter (incorrect back lighting).
- Bakery will now remove the Read-Only flag from files it is going to overwrite (was a problem with some version control systems).
- Fixed incorrect HDRI intensity in Gamma color space.
- Fixed incorrect HDRI intensity when using Android platform.
- Fixed errors when having Light Mesh, Area Light and Mesh Filter/Renderer on the same object.
- Fixed incorrect rendering sometimes after changing the active scene in a multi-scene setup.
- Fixed incorrect shadows from very low resolution alpha maps.
- Fixed alpha maps not working sometimes when there were meshes with no UV0 in the scene.
- Fixed incorrect cutoff threshold being selected for some alpha maps.
- Fixed some cases of red/blue lighting on non-lightmapped objects.
- Fixed lightmaps sometimes being imported twice after baking.
- Fixed Win32Exception when project path had an apostrophe in it.
- Fixed ftModelPostProcessor error sometimes showing up during scene export.
- Fixed early light clipping, especially visible on very bright IES lights.
- Fixed scene export error sometimes showing when GI VRAM optimization was enabled.
- Fixed incorrect shadowmask grouping introduced in v1.45.

Special thanks to Andrew Welch (Oculus) and Yuvii for helping me with some features.

### v1.51

Hotfix for v1.5:

- Fixed scene export error due to null materials in the scene.
- Fixed the combination of Area Light, Light Mesh and a prefab in 2018.3.
- Fixed EditorOnly dynamic objects affecting light probes.

### v1.55

- RTX support - massive performance boost on supported GPUs
- Alternative light probe rendering mode
- Added assembly definitions to improve script compilation times
- Added improved light probe sampling mode to Bakery shader
- Unity lights are now automatically marked as baked/realtime on  $\geq 2017.3$
- Improved UI for light components
- Fixed scene files becoming large
- Fixed bright edges sometimes appearing around UV charts in Indirect/Shadowmask modes
- Fixed opening baked scenes with minimum 5 required scripts on machines with no Bakery installed
- Fixed Bakery shader failing to compile in some Android projects
- Fixed double-sided option not working in Bakery shader with deferred rendering
- Fixed denoiser attempting to process per-vertex shadowmasks

### v1.551

- Hotfix for scene export error happening on some projects

### V1.6

- Subtractive lighting mode support.
- Added AO-only baking mode.
- Added cone spot lights exactly matching HDRP.
- Experimental: added xatlas as optional unwrapper.
- Experimental: network baking.
- Added "Export terrain trees" option to UI.
- Added example scenes for subtractive and baked prefabs.
- UV padding adjustment should be now 2x faster.
- Point light falloff can be now tweaked.
- HDRP shader was updated to work with 5.13.0.
- LWRP shader was updated to work with 5.7.2.
- L1 probes now use twice more samples than lightmaps for comparable precision.
- L1 probe render can be properly triggered with Render Light Probes button.
- Bakery skybox shader should now work with instancing/VR.
- Point light gizmos now have adaptive size.
- Added "Transparent self-shadow" option for LMGroups (useful for translucent foliage).
- Added ray bias option for LMGroups (useful for highly perturbed normals).
- Fixed "match" buttons not working correctly for HDRP and LWRP lights
- Fixed lightmap texture type not always being set correctly for assets.
- Fixed shadowmasks being broken after only calling denoiser/seam fixer without rendering.
- Fixed incorrect L1 probe values.

- Fixed L1 probes not working in Baked Normal Maps mode.
- Fixed detail normal maps not working in Bakery shader with RNM mode.
- Fixed Render Selected/Light Probes not re-applying previously baked vertex LMs.
- Fixed file access when some version control systems mark files as read-only.
- Fixed errors sometimes appearing after deleting baked shadowmasked lights.
- Fixed incorrect packing of object hierarchies with custom UVs.
- Fixed scene export error after using UV validation feature.
- Fixed terrains baked black in Baked Normal Maps mode.
- Fixed using RTX mode with GI VRAM optimization.
- Fixed VRAM estimation in large scenes.
- Bakery Wiki is now open!

#### v. 1.65

- Skinned mesh renderers are now supported.
- Updated denoiser to take advantage of RTX hardware. Use "Legacy denoiser" checkbox if you encounter any problems.
- Added shader subgraphs for HDRP and LWRP (support for per-vertex, RNM and SH lightmaps).
- Added "Samples Multiplier" option affecting quality of all lights and GI. Use it to quickly switch between draft/final quality.
- New LMGroup assets are now always created in the active scene folder.
- Added "Bakery Always Render" component to force baking objects even if their renderers are disabled. Useful for invisible shadow casters.
- Added "Adjust sample positions" option to toggle default leak prevention algorithm.
- Added "Flip normals" option to LMGroups.
- UV padding for particular models can be now saved to an asset and locked (Utilities -> Save UV padding to asset).
- Added C# events: OnFinishedFullRender, OnPreRenderProbe and OnFinishedProbes.
- Fixed terrain exporting errors after any warning dialog box was shown.
- Fixed Light Meshes with selfshadow = on sometimes adding black spots to lightmaps.
- Fixed scene view being stuck in Checker Preview mode if it wasn't manually disabled.
- Fixed incorrect packing of renderers from LMGroups using "override resolution".
- Fixed Unity switching to directional lightmap mode when only color lightmaps are present.
- Fixed incorrect float->string conversion in newer Unity versions when using normal offset option in LMGroups.
- Fixed texture settings not being correctly applied when output path had different slashes.
- Fixed SH lightmaps having color clipping/banding in dark corners.
- Fixed Light Meshes being incorrectly culled in L1 light probe mode.

## v. 1.7

- Large amounts of point/cookie/cone/cubemap/IES lights are now baked much faster (Batch Point Lights option, enabled by default).
- Added support for the upcoming interactive preview (RTPreview) plugin.
- Added option to use xatlas for lightmap atlas packing (not unwrapping). Enabled by default.
- Atlas packer can be chosen globally and for every Lightmap Group.
- Added Hole Filling option when packing with xatlas, significantly improves atlas efficiency.
- LODs don't generate too many lightmaps anymore (Post-Packing option, enabled by default).
- Added support for Terrain Holes (terrain optimization must be off).
- Added Texture Projection option for Direct Lights.
- Added BakeryPackAsSingleSquare component
- Added better scripting API.
- Optimized the scene export process.
- Added support for URP 7.2.1.
- Added support for HDRP 7.2.1.
- L1 light probe mode is now default.
- UV adjustment now works for 32-bit meshes on >= 2018.4.
- Added validation for previously silently ignored problems, such as:
  - Unwrapper failing to re-unwrap models due to index overflow;
  - Trying to render without "export geometry" checkbox and different scene being cached;
  - Using Render Selected/Render Light Probes (L1) after scene geometry/layout changed.
  - Using Render with L1 light probe mode and having no light probes in the scene.
- Replaced Adjust UV Padding checkbox with 3 options (don't change UV, adjust UV, remove previous adjustments).
- Baked Normal Maps mode now properly respects MikkTSpace.
- Incorrect slashes in Output Path are now automatically fixed.
- Legacy Denoiser is now supported in Network Baking.
- Fixed baking blendshape-only skinned renderers without bones.
- Fixed UI on 2019.3.
- Fixed terrain GI on 2019.3.
- Fixed some functions attempting to access Output Path before it is created.
- Fixed Legacy Denoiser checkbox not being saved.
- Fixed Lightmap Group Selector not properly saving values when applied to prefabs on >= 2018.3.
- Fixed Legacy light probes sometimes not saving on new Unity versions.
- Fixed Baked Normal Maps mode not working with skinned renderers.
- Fixed "float overflow" error during scene export.
- Fixed error when using area lights with width or height set to 0 (thanks Pierre Gac).
- Fixed "Save padding to asset" function not working on newer Unity versions.
- Fixed Lightmapped Prefab UI breaking after prefab sub-objects are deleted.

### v. 1.71

- Bakery now sets BAKERY\_INCLUDED compiler define for the project
- Using Checker Preview will now print used lightmap count to console.
- Fixed detection of scene modifications.
- Fixed scene export error when some scenes are present but unloaded.
- Fixed Atlas Packer option not saving to default settings.
- Fixed occasional "working directory has changed" error when using RTPreview and changing IES lights.
- Fixed rare build error on some platforms due to unclamped occlusionMaskChannel value (thanks atomicjoe).
- Fixed Bakery shader not using SH lightmaps if no normal map is set.
- Fixed colored banding in very dark areas when using SH lightmaps.

### v. 1.8

- Added 3D texture baking as a light probe alternative (BakeryVolume).
- Added OpenImageDenoise and OptiX 7.2 denoisers.
- Lightmap Groups can be now applied to objects with LODs.
- Legacy light probe rendering speed was significantly improved (thanks atomicjoe).
- Added option to manually group multiple lights in one shadowmask.
- Added automatic compatibility detection for RTX mode and denoisers.
- Updated and improved HDRP and URP shader graphs.
- Terrain.castShadows is now taken into account (was always true before).
- Improved spotlight intersection precision when grouping shadowmasked lights (less chance of going out of channels).
- "Clear baked data" no longer clears baking settings (but it can if you ask).
- AO no longer applies darkening to L1 light probes.
- Added \_TransparencyLM support (will override main alpha map; red channel used).
- Added option to use PNG instead of TGA for masks or directions (ftAdditionalConfig.cs).
- Bakery no longer instantly disables realtime GI in the scene or disables built-in auto-generation before any lightmaps are baked.
- Reduced VRAM usage for GI pass when many LODs are used in the scene.
- Added OnPreFullRender event.
- Fixed skinned meshes used as light meshes.
- Fixed incorrect (indirect-only) dominant direction baked in Subtractive mode.
- Fixed light meshes sometimes leaking onto other objects.
- Fixed cubemap encoding detection in Android projects (now correctly handles both DoubleLDR and true HDR).
- Fixed inverted HDRI rotation (use "Correct rotation" checkbox).
- Fixed L1 light probes showing an error in a scene with empty light probe groups.
- Fixed default atlas packer not always respecting "Split by scene".
- Fixed light mesh + Unity area light combination sometimes resulting in wrong light rotation.
- Fixed dominant direction mode sometimes not correctly activated.
- Fixed precision errors with light meshes having very large scale value.
- Fixed AO blending when using large AO intensity values.
- Fixed rare out-of-bounds error on scene export related to textured light meshes (thanks Silent).



- Fixed batched point lights silently failing when lights were incorrectly configured, instead of using fallback and printing to console.
- Fixed sometimes inaccurate/noisy silhouettes of alpha cutouts.
- Fixed alpha thresholds sometimes applying to wrong alpha maps.
- Fixed incorrect weighting of light meshes for L1 light probes very close to the light surface.
- Fixed "Match material to light" not being undoable.
- Fixed disabled direct/point lights affecting light probes in Legacy mode.
- Fixed spotlight gizmo shape.

### v. 1.9

- Added BakerySectors. A new experimental system to split scenes into separately bakeable chunks.
- DX12 editor mode is now supported.
- Added volume compression for desktop/consoles (BC6H/BC7 format).
- Added support for custom shader-based transparency.
- Added a patch downloading utility.
- Lightmaps are no longer reset if the bake was canceled.
- Clear Baked Data menu now has more options.
- Baked Normal Maps mode now uses the expected per-pixel MikkTSpace on URP/HDRP.
- AO intensity now works in Ambient Occlusion Only mode.
- Added option to change IES light axis.
- Added volume creation option to Bakery->Create menu.
- Added OnFinishedReflectionProbes event.
- Added some volume rotation options.
- Global options from ftAdditionalConfig.cs were moved to Project Settings.
- Added a global option to delete previously baked lightmap files before baking.
- Added a global option to control the amount of info written to the console.
- Added a global option to select volume render mode separately from the lightmap mode.
- Added a global option to enable alternative "Scale In Lightmap" behaviour (closer to built-in).
- Added a global option to control how the sample adjustment algorithm handles low-poly objects with smooth normals.
- BakeryVolume UI now shows estimated VRAM usage given current settings.
- BakeryVolumeReceiver example script was updated to also affect skinned meshes.
- Fixed incorrectly baking HDRP scenes with very high-intensity light sources. Enabled proper HDR mode for the OptiX 7 denoiser, which is now recommended for HDRP.
- Fixed terrains not baking properly due to DrawInstanced property.
- Fixed terrains not receiving some local lights due to incorrectly computed bounds.
- Fixed denoiser benchmark failing due to some version control systems locking the files.
- Fixed a bug where some LODs didn't receive bounces from some other LODs (v1.8 regression).
- Fixed objects not baking if GameObject had multiple renderers with the first one being unsupported.
- Fixed using OpenImageDenoise via Network Baking.
- Fixed baking volumes via Network Baking.
- Fixed occasional shadowmask leaking when the post-packing option was enabled.

- Fixed light probe render not reloading directional maps.
- Fixed some incorrect results when baking LODGroups added into LMGroups.
- Fixed errors when attempting to use RenderTexture as alpha.
- Fixed Baked Normal Maps not respecting negative scale.
- Fixed progress bar being on top and not minimizable during scene export.
- Fixed Bakery shaders failing to compile for mobile.
- Fixed legacy light probe render not using RTX for direct lighting.
- Fixed legacy light probe render sometimes producing incorrect values (Thanks, atomicjoe).
- Fixed legacy light probe render taking dynamic skinned meshes into account.
- Fixed active scene changing after legacy light probe render.
- Fixed vertical slider sometimes disappearing in the UI.
- Fixed Bakery shader not changing its RenderType tag to Opaque when changing it in the UI.
- Fixed IES conversion process being called for already converted files.
- Fixed error when using Checker Preview or RTPreview for the first time with many opened scenes.
- Fixed Bakery not working if log files were marked read-only by version control.
- Fixed ftModelPostProcessor not adjusting UV padding if ftGlobalStorage was not yet loaded, but model meta files were still accessible.
- Fixed Bakery buttons working in Play Mode.
- Some smaller fixes and optimizations.

#### v. 1.95

- Added MonoSH directional mode. Takes 2x less memory than the cheapest Dominant Direction mode, while being close to full SH in quality.
- Added MonoSH support to the Bakery shader, as well as URP and HDRP graphs.
- Added Atlas Preview. When the checker is shown, it opens a new window showing the UV layout of every future lightmap atlas before the bake. Useful for checking out packing quality and lightmap count.
- Area Lights/Light Meshes can now bake Shadowmasks (usable in HDRP or custom renderers).
- Added supersampling option for directional lights.
- Improved point light shadow sampling (fixed some cases of banding; less samples are needed for a clean image). Old method is still available behind the "Legacy sampling" checkbox, just in case.
- Light color temperature is now taken into account.
- Baked Tag in LightmapParameters assets is now respected. Additionally, built-in LightmapParameters are now extended with Bakery-specific options (e.g. overriding rendering mode, enabling SSS for specific renderers without using a LMGroup, etc).
- Shadowmasks with < 4 lights will now force the texture importer to omit the alpha channel, reducing memory usage.
- Bakery now takes the "Receive Global Illumination" option into account.
- Added Auto-resolution option for Lightmap Groups.
- Added Utilities -> Clear cache.
- Added global options to generate a limited amount of mipmaps for every lightmap.
- Added global options to control the way lightmaps are compressed on import.

- Added global "High quality direction" toggle to control compression quality for directional maps.
- Added global "Remove ringing" option for Legacy light probes.
- Batch scene baker is now added to the main package.
- Added OnPreReflectionProbeRender event.
- Added "Ignore warnings" option to Lightmapped Prefabs.
- Added options to disable parts of the sample adjustment algorithm to Project Settings.
- Added a workaround for a NVIDIA driver bug when running the denoiser with low resolution.
- Added "Direct, Indirect and Shadowmask" contribution mode for lights to use with custom shaders (same as Direct and Indirect, but the Shadowmask is also produced and assigned).
- Added "Shadowmask with falloff" option for lights to use with custom shaders (bakes attenuation into the shadowmask).
- Added "Suppress all popups" option to skip any dialog boxes after pressing Render.
- Enabled Bakery shader's per-vertex SH mode on GL and GLES.
- Improved per-vertex baked data importing (thanks ptbarnaby).
- Improved tooltip texts (thanks mauricepape).
- Volume texture names are now based on their parent LightmappedPrefab name, if present (thanks Andrew Welch).
- Bakery's Project Settings are now stored relative to its other folders.
- Added "First light uses Alpha" option for Volume shadowmasks, so A8 format can be used when there is only one light.
- Log file size is now limited and doesn't bloat forever.
- Small improvements to the sample adjustment algorithm.
- Small improvements to the area light weighting algorithm.
- Removed old "GI VRAM Optimization" as it was giving more issues than it was solving; please use BakerySectors for huge scenes instead.
- Fixed compatibility with latest HDRP.
- Fixed issues with the new "Parallel asset import" Unity option.
- Fixed matching a Light Mesh on a GameObject with both a MeshRenderer and an Area Light.
- Fixed rare cases of phantom Light Mesh geometry appearing where it shouldn't during the bake.
- Fixed using Optix7 denoiser with "Fix bright edges".
- Fixed RGBM-encoded cubemaps not working properly when fed to Skylight.
- Fixed not being able to Undo "Match skybox to skylight".
- Fixed matching to HDRP lights.
- Fixed terrain hole texture resolution not being properly respected.
- Fixed Bakery shader compilation issues in some projects.
- Fixed Bakery shader's specular intensity when used with a directional map.
- Fixed some issues with the Post-packing option.
- Fixed useless overhead from light components.
- Fixed lightmaps reverting when light probe render is cancelled.
- Fixed BakerySector capture point numbers drawing behind camera.
- Fixed "Clear baked data" not reverting shadowmasked lights until scene reload.
- Fixed some parts of the Checker Preview UI disappearing when "Scale per map type" options are unrolled.

- Fixed SSS.
- Fixed lightmaps disappearing on new Unity versions when trying to render reflection probes (and appearing back after playing/reloading).
- Fixed emissive color sometimes leaking to unrelated charts.
- Fixed ValidateOutputPath() not being called when rendering from scripts.
- Fixed errors when using non-ASCII characters in scene and LMGroup names.
- Fixed error when trying to bake volumes in Shadowmask mode without shadowmasked lights.
- Fixed volume shadowmasks for point/area lights.
- Fixed lightmap count printed to console when enabling Checker Preview.
- Fixed axis for cubemap and cookie lights.
- Fixed non-shadowmasked LMGroups sometimes producing empty shadowmasks when they're globally enabled.
- Fixed not respecting static flags and scale in lightmap when merging multiple BakerySectors.
- Fixed unused maps still being referenced by the scene after baking multiple BakerySectors.
- Fixed AO-only mode not working together with Baked Normal Maps.
- Fixed "Alternative scale in lightmap" option when used together with xatlas.
- Fixed Undo not working for Volume bounds movement.
- Fixed rare cases of "Can't have more than one light on one object" message getting stuck.
- Fixed an issue with Bakery trying to locate its own folder (thanks PeppeDK).
- Fixed window jittering when DPI is 125% and Unity is between 2018.2 and 2019.1.

#### v. 1.96

- Added LightMesh batching (performance improvement).
- Added OpenImageDenoise2 (GPU) support.
- Added Light Probe baking ability for BakerySectors.
- Added Direct Light texture projection viewport controls.
- Added a workaround for the infamous ["Unity reimports the whole project"](#) bug (of Unity).
- Added selected object highlighting to Atlas Preview.
- Added baked reflection occlusion support to Bakery shader.
- Fixed area lights captured by legacy Light Probes.
- Fixed incorrect Meta Pass output on objects with per-vertex or "scale in lightmap = 0" objects.
- Fixed lighting data asset application order in 2021+.
- Fixed benchmark issues when project files are marked as read-only.
- Fixed convex shape intersection when counting how many shadowmasked lights intersect.
- Fixed cancel button not working when prompted about saving the scene using L1.
- Fixed compressed volume direction.
- Fixed BakerySectors not using \_BaseMap/\_BaseColorMap.
- Fixed using \*.asset files for color maps.
- Fixed "Update Skybox Probe" on HDRP.
- Fixed lightmap importing when "Parallel Import" is enabled in Unity (again).
- Fixed baking SH/RNM and L1 Light Probes with 0 bounces and Shadowmask.
- Fixed RTPreview marking objects as unwrapped without actually unwrapping.
- Fixed objects with "scale in lightmap = 0" affecting atlas packing.

- Fixed Sector preview using incorrect transform on 2022+.
- Fixed progress bar not disappearing when baking prefabs on 2023+ until Bakery window was in focus.
- Some UI fixes.
- “Clear baked data” menu can now delete previously baked per-vertex streams, if desired (thanks kidkwazine)

#### v. 1.97

- Improved memory usage when dealing with very geometry-heavy scenes.
- New LOD tracing mechanism. Scenes with lots of LODGroups should bake much faster now.
- Added Dither Transparency option. Allows for semi-transparent shadows by automatically dithering opacity values and blurring/denoising them later.
- Added Bakery Light Filter component also allowing for colored transparency, like stained glass (see new example scene).
- Added L2 light probe mode. Higher precision than L1, almost the same baking speed.
- Added Sampling Density option for per-vertex lightmap groups. Averages many samples across triangles instead of one at each vertex.
- Added Presets. All scene baking settings can be saved/loaded into them.
- Added Bakery Shared LOD UV component. Allows reusing the same lightmap for all LODs within a LODGroup (if UVs match).
- Light Mesh textures can now be tiled.
- Added Correct Distortion option for point lights in Cookie mode (uses better projection).
- Improved volume leak fixing algorithm.
- Added High Quality option for atlasing when using xatlas.
- Added a softer blend option for Ambient Occlusion.
- Added “Adjust UV padding for new meshes only” (thanks Dan).
- Added probe-level visualization for Bakery Volumes (thanks Dan).
- Bakery Volumes can now be rotated around Y.
- Bakery Volumes can be multi-edited.
- Atlas preview now highlights children of selected objects.
- Port for Network Baking can now be configured in the UI.
- Project Settings option: Bakery menu can be put into Tools menu.
- Project Settings option: automatically render reflection probes after lightmaps/probes.
- Project Settings option: force specific format for every map type.
- Project Settings option: ringing removal strength for L2 light probes.
- “High quality direction” option now affects MonoSH L1 map compression (thanks BoatFloater)
- Scene list for Batch Baking can now be saved/loaded.
- More tweakable parameters for reflection occlusion in Bakery Shader.
- Little help icons on components actually open the relevant wiki page now.
- Optimized volume sampling code in Bakery Shader (thanks scoan-sd)
- Some fixes for occlusion probe baking in URP.
- Fixed GI from terrains in HDRP.
- Fixed skinned mesh baking when the mesh is inside a Sector.
- Fixed some shader / texture flipping issues when Editor is set to GLES3.

- Fixed Baked Normal Maps mode when Editor is set to DX12 / Vulkan.
- Fixed Bakery Shader reflection occlusion in Deferred.
- Fixed instancing checkbox not showing in Bakery Shader UI.
- Fixed editing multiple lightmap group assets.
- Fixed lighting from non-selfshadowing area lights in Legacy light probe mode.
- Fixes for baking in ECS projects (thanks to AoiKamishiro for one).
- Fixed volume texture asset name warning on new Unity versions (thanks BoatFloater)
- Fixed non-uniform scaled normals.
- Fixed “Beep on finish” causing an error when project is set to .NET Standard; also made it work with Network Baking.
- Fixed lightmap group Auto Resolution logic.
- Fixed Light Mesh / Area Light matching on Unity 6 HDRP.
- Fixed using Bakery in batch mode.
- Fixed some rare crash with newer drivers.
- Some UI fixes / improvements.
- [BETA] Initial Adaptive Probe Volumes support.