

CHAPTER 11: OTHER TASKS

UNPACKING THE BSA ARCHIVES

This section will cover unpacking the .bsa archives.

For this we'll need a copy of [BAE](#), the Bethesda Archive Extractor, which you can download from Nexusmods.

Launch bae.exe.



Figure 1404 - BAE.

To extract a .bsa archive, drag and drop it into the utility.

All items in the archive should be selected by default. If they aren't, press Select All or manually choose the specific items you want to extract.

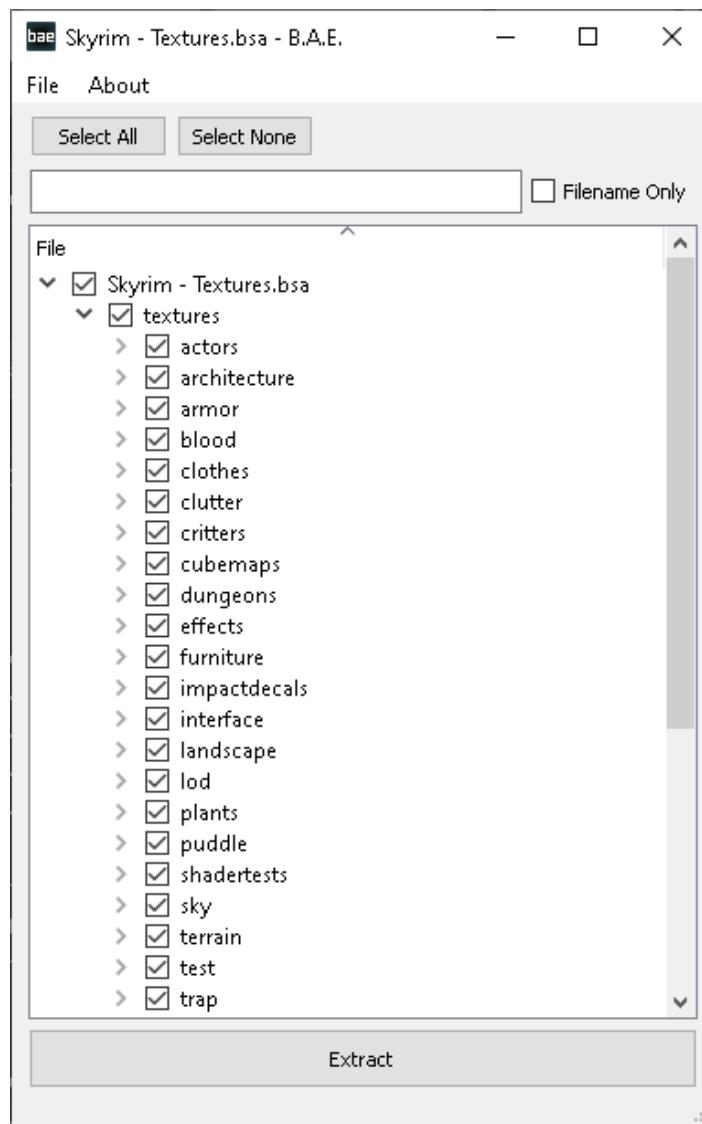


Figure 1405 - The *Skyrim - Textures.bsa* in BAE.

Click Extract.

Select the folder to extract the assets to and click the Select Folder button.

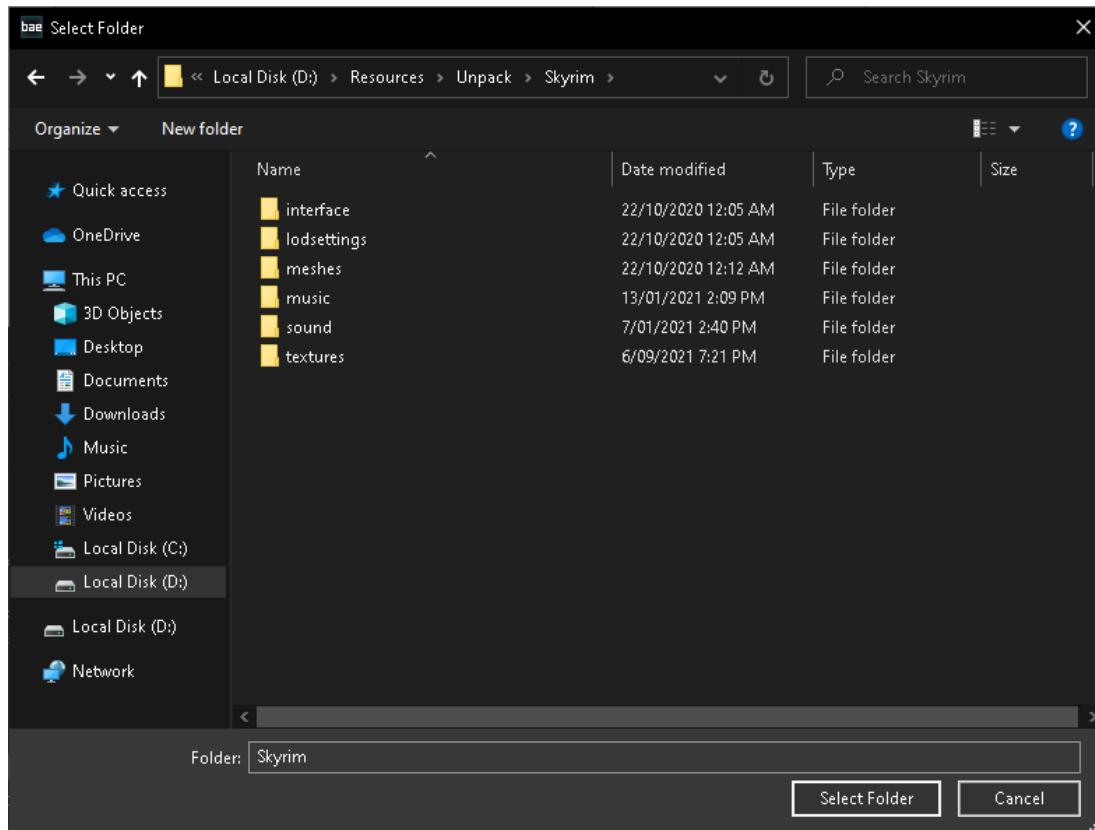


Figure 1406 - Choosing the folder you want to extract to.

Wait until the extraction process is complete.

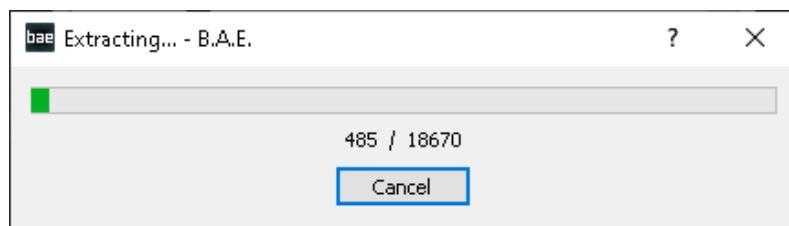


Figure 1407 - Extraction progress.

Once the process is complete, close BAE.

ADDING ADDITIONAL MASTER FILES

If you want to include assets from the DLC or from other master files, you can add additional dependencies to your mod.

These steps assume you haven't used xEdit to set the ESM flag in your mod yet.

Firstly, open your `SkyrimEditor.ini` file. Go to [General] and add the following:

```
bAllowMultipleMasterFiles=1
bAllowMultipleMasterLoads=1
```

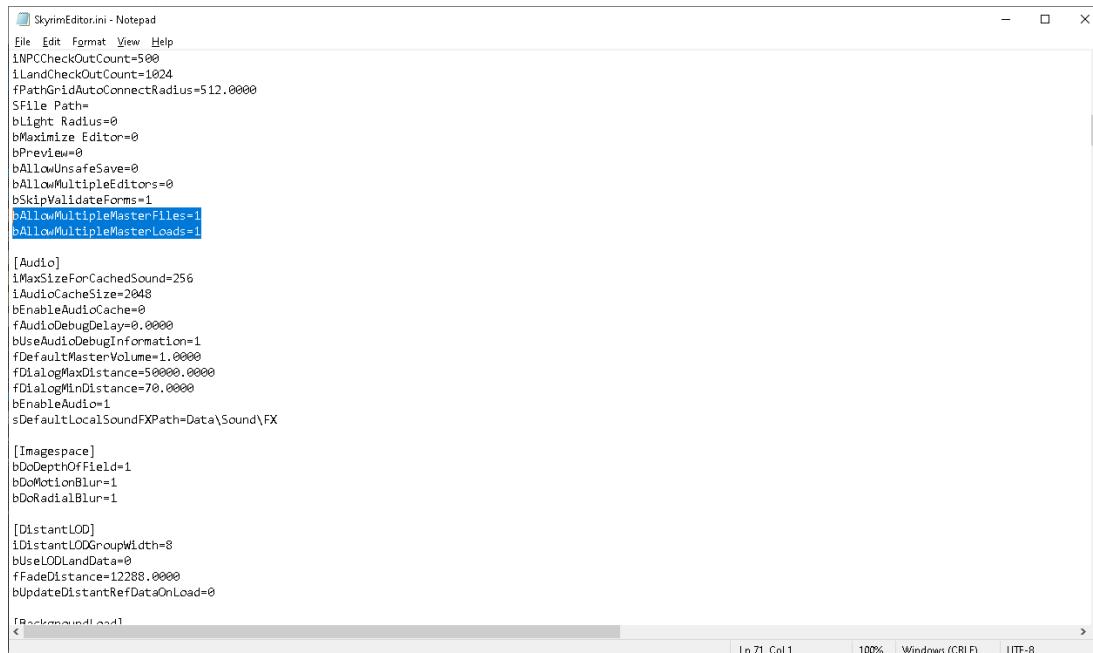


Figure 1408 - `SkyrimEditor.ini` load multiple master files.

Next, scroll down to [Archive] and add the .bsa file associated with the master to SArchiveList and SResourceArchiveList.

For example, if you want to make your mod dependent on Dawnguard, make sure `Dawnguard.bsa` is added to these two entries.

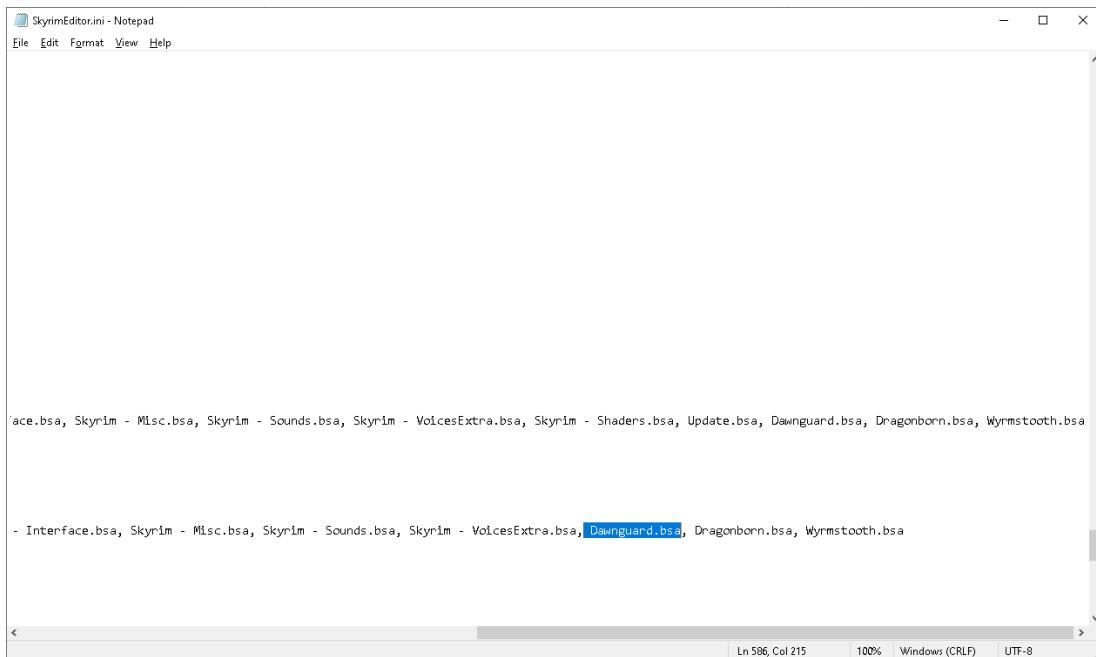


Figure 1409 - List of BSA archives loaded by the Creation Kit.

Launch the Creation Kit. Go to File > Data. Tick your mod and click ‘Set as Active File’.

Now tick the master file you want to make your mod dependent on, and click OK to load.

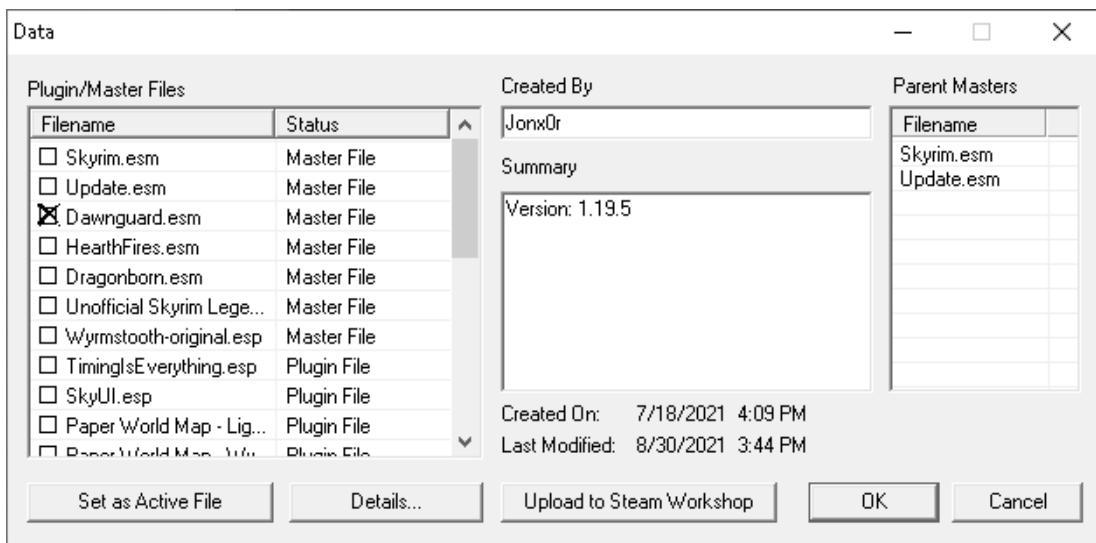


Figure 1410 - Adding Dawnguard.esm as a dependency.

Click Save.

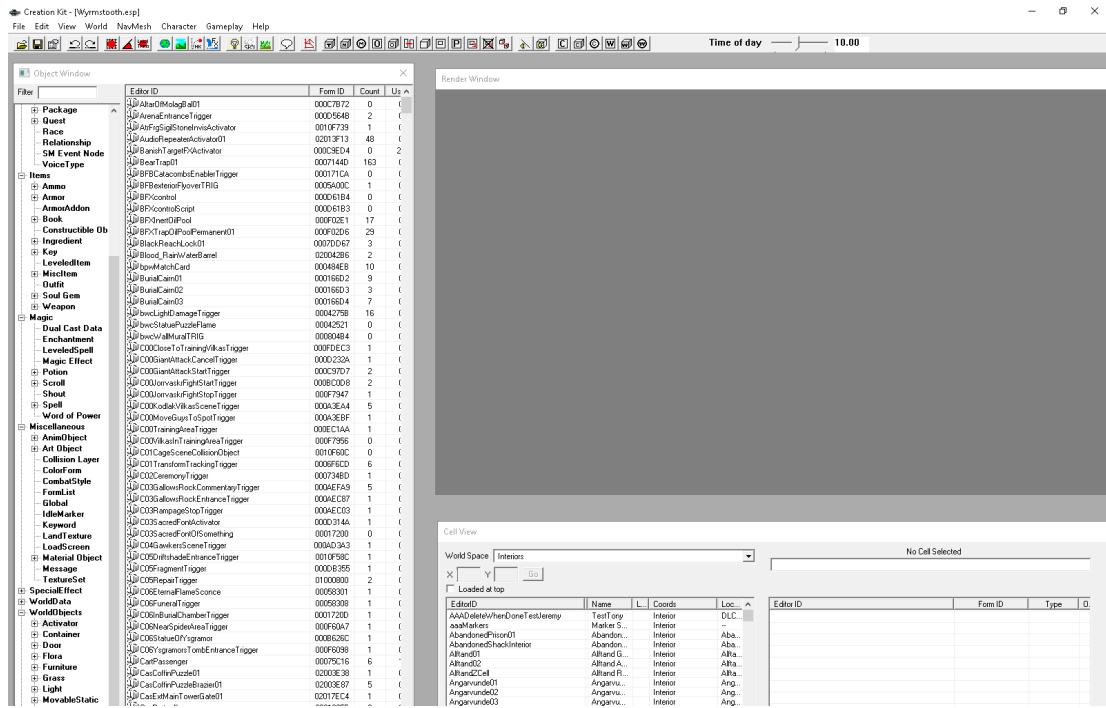


Figure 1411 - Saving the mod in the Creation Kit.

Once saving has completed, go back to File > Data. The master file you added should now appear as a dependency when you highlight your mod.

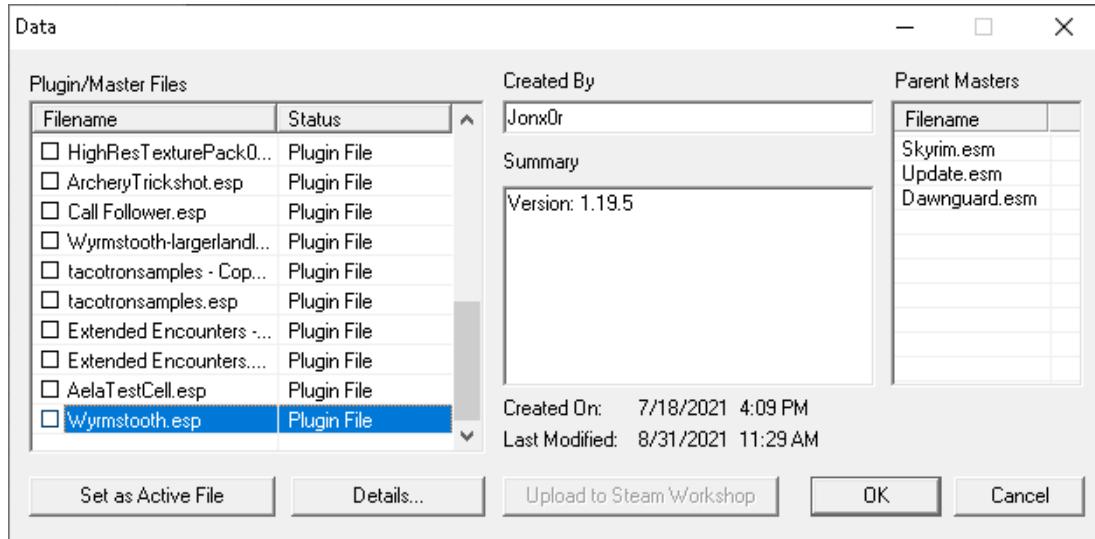


Figure 1412 - New dependency is listed.

REMOVING ACCIDENTAL EDITS

Say, for example, you accidentally moved a barrel in a base-game cell and already saved your mod, but you'd like to remove that change for compatibility purposes.

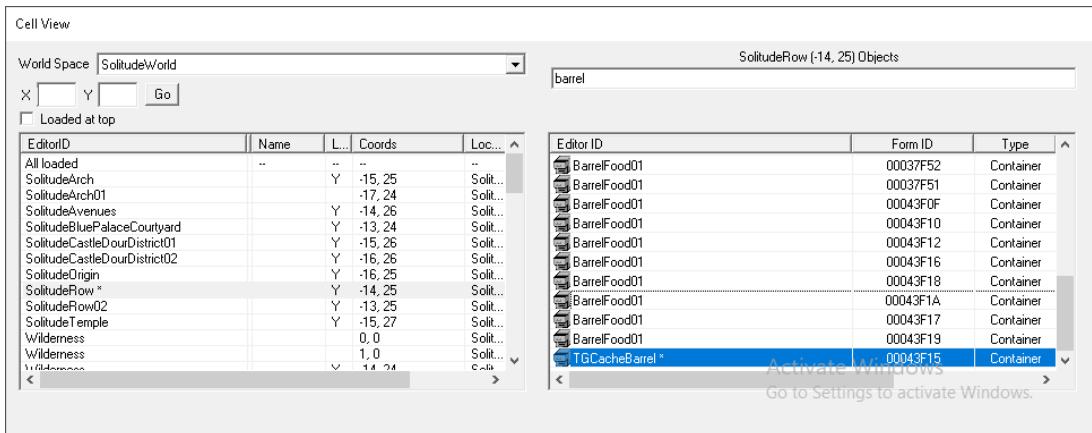


Figure 1413 - An example of an unwanted edit.

Go to File > Data.

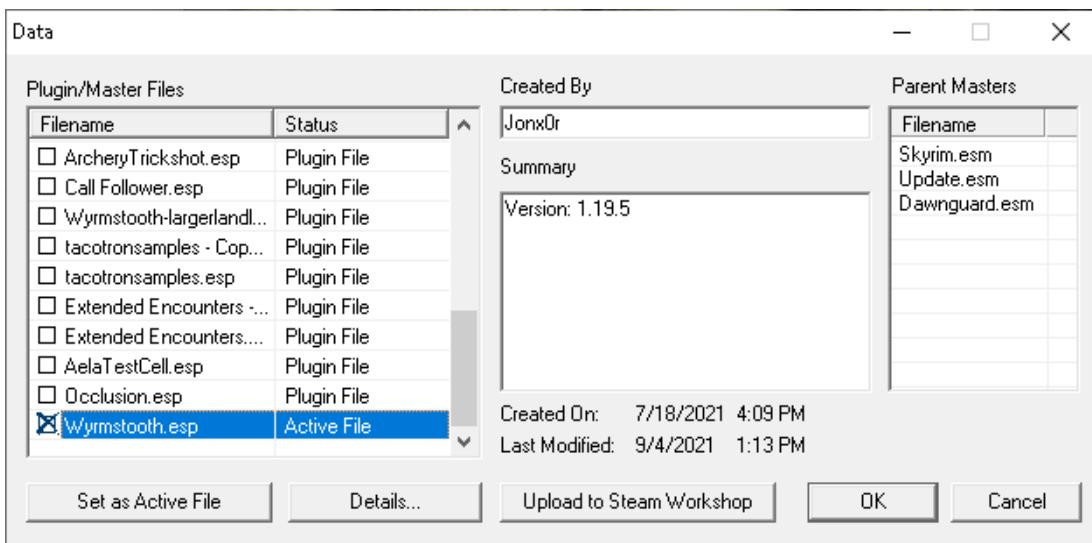
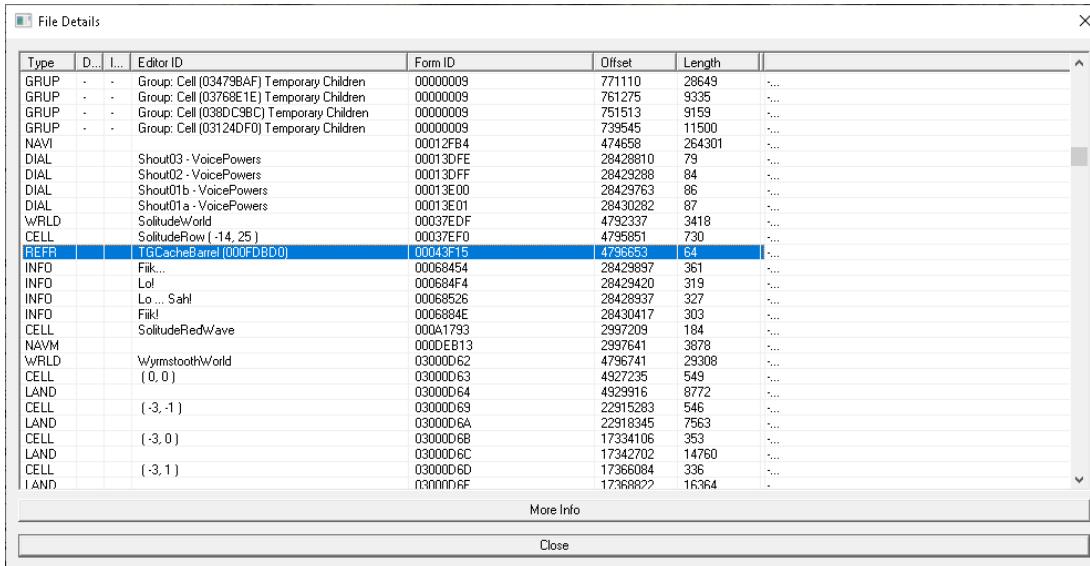


Figure 1414 - List of mods.

Highlight your mod in the Plugin/Master Files list and click on the Details button.

Expand the Form ID column. It'll be to the right of the Editor ID column and will be collapsed by default.

Click on the Form ID field to sort records numerically from lowest to highest.



Type	D...	I...	Editor ID	Form ID	Offset	Length	
GRUP	-	-	Group: Cell [03479BAF] Temporary Children	00000009	771110	29649	...
GRUP	-	-	Group: Cell [03768E1E] Temporary Children	00000009	761275	9335	...
GRUP	-	-	Group: Cell [038DC3BC] Temporary Children	00000009	751513	9159	...
GRUP	-	-	Group: Cell [03124DF0] Temporary Children	00000009	739545	11500	...
NAVI				00012FB4	474658	264301	...
DIAL			Shout03 - VoicePowers	00013DFE	28428810	79	...
DIAL			Shout02 - VoicePowers	00013DF	28429288	84	...
DIAL			Shout01b - VoicePowers	00013E00	28429763	86	...
DIAL			Shout01a - VoicePowers	00013E01	28430282	87	...
WRLD			SolitudeWorld	00037EDF	4792337	3418	...
CELL			SolitudeRow (-14, 25)	00037EF0	4795851	720	...
REFR			TGCacheBarrel (000FDBD0)	00043F15	4796653	64	...
INFO			Flik...	00068454	28429697	361	...
INFO			Lol	000684F4	28429420	319	...
INFO			Lo... Sahl	00068526	28428937	327	...
INFO			Flik!	0006884E	28430417	303	...
CELL			SolitudeRedWave	000A1793	2997209	184	...
NAVW				000DEB13	2997641	3878	...
WRLD			WymstoohWorld	03000062	4796741	29308	...
CELL	(0, 0)			03000063	4927235	549	...
LAND				03000064	4923916	8772	...
CELL	(-3, -1)			03000069	22915283	546	...
LAND				0300006A	22918345	7563	...
CELL	(-3, 0)			0300006B	17334106	353	...
LAND				0300006C	17342702	14760	...
CELL	(-3, 1)			0300006D	17366084	336	...
LAND				n3nnnn6F	1736892?	16364	...

Figure 1415 - Form ID field sorted numerically.

Find the reference you want to remove from your mod. In our example that'll be a TGCacheBarrel.

Click on it to highlight it and press Delete.

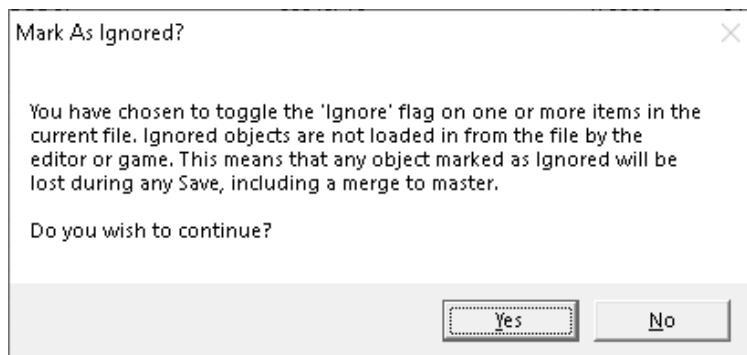


Figure 1416 - Removal confirmation.

Click Yes to the Mark As Ignored pop-up warning.

You should now see an 'I' next to the deleted reference.

Type	D...	I...	Editor ID	Form ID	Offset	Length
GRUP	-	-	Group: Cell (03479BAF) Temporary Children	00000009	771110	29649
GRUP	-	-	Group: Cell (03768E1E) Temporary Children	00000009	761152	9335
GRUP	-	-	Group: Cell (038DC9BC) Temporary Children	00000009	751193	9159
GRUP	-	-	Group: Cell (03124DF0) Temporary Children	00000009	739545	11500
NAVI				00012FB4	474658	264301
DIAL			Shout03 - VoicePowers	00013DFE	28428810	79
DIAL			Shout02 - VoicePowers	00013DFF	28429288	84
DIAL			Shout01b - VoicePowers	00013E00	28429763	86
DIAL			Shout01a - VoicePowers	00013E01	28430282	87
WRLD			SolitudeWorld	00037EDF	4792337	3418
CELL			SolitudeRow (-14, 25)	00037EF0	4795851	730
REFR	I	I	TGCacheBarrel (000FD8D0)	00043F15	4796653	64
INFO			Flik...	00068454	28429697	361
INFO			Lol	000684F4	28429420	319
INFO			Lo... Sahl	00068526	28428937	327
INFO			Flik!	0006884E	28430417	303
CELL			SolitudeRedWave	000A1793	2997209	184
NAVM				000DEB13	2997641	3878
WRLD			WymstoohWorld	03000D62	4796741	29308
CELL	(0, 0)			03000D63	4927235	549
LAND				03000D64	4929916	8772
CELL	(-3, -1)			03000D69	22915283	546
LAND				03000D6A	22918345	7563
CELL	(-3, 0)			03000D6B	17334106	353
LAND				03000D6C	17342702	14760
CELL	(-3, 1)			03000D6D	17366084	336
LAND				03000D6F	17368827	16364

Figure 1417 - The edit to TGCacheBarrel has been flagged as Ignored.

For my example, I'll be removing the CELL and WRLD changes that were also created when the barrel was moved.

Type	D...	I...	Editor ID	Form ID	Offset	Length
GRUP	-	-	Group: Cell (03479BAF) Temporary Children	00000009	770987	29649
GRUP	-	-	Group: Cell (03768E1E) Temporary Children	00000009	761152	9335
GRUP	-	-	Group: Cell (038DC9BC) Temporary Children	00000009	751193	9159
GRUP	-	-	Group: Cell (03124DF0) Temporary Children	00000009	739422	11500
NAVI				00012FB4	474535	264301
DIAL			Shout03 - VoicePowers	00013DFE	28428687	79
DIAL			Shout02 - VoicePowers	00013DFF	28429165	84
DIAL			Shout01b - VoicePowers	00013E00	28429640	86
DIAL			Shout01a - VoicePowers	00013E01	28430159	87
WRLD	I	I	SolitudeWorld	00037EDF	4792214	3418
CELL	I	I	SolitudeRow (-14, 25)	00037EF0	4795728	730
REFR	I	I	TGCacheBarrel (000FD8D0)	00043F15	4796530	64
INFO			Flik...	00068454	28429774	361
INFO			Lol	000684F4	28429297	319
INFO			Lo... Sahl	00068526	28428814	327
INFO			Flik!	0006884E	28430294	303
CELL			SolitudeRedWave	000A1793	2997086	184
NAVM				000DEB13	2997518	3878
WRLD			WymstoohWorld	03000D62	4796618	29308
CELL	(0, 0)			03000D63	4927112	549
LAND				03000D64	4929793	8772
CELL	(-3, -1)			03000D69	22915160	546
LAND				03000D6A	22918222	7563
CELL	(-3, 0)			03000D6B	17333983	353
LAND				03000D6C	17342579	14760
CELL	(-3, 1)			03000D6D	17365961	336
LAND				03000D6F	17368829	16364

Figure 1418 - Removing the CELL and WRLD changes as well.

Click Close to close File Details.

Click OK to reload your mod.

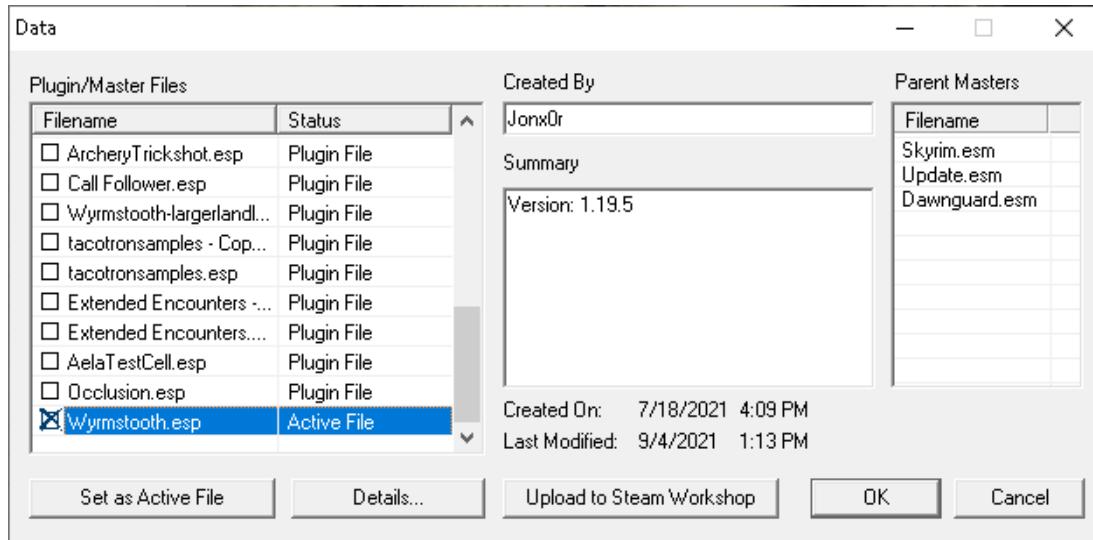


Figure 1419 - Reloading your mod.

Click on the Save button to save your mod.

Now go back to File > Data.

Again, expand the Form ID column and click on it to sort the records by Form ID.

Confirm that the deleted records are no longer listed.

Type	D...	I...	Editor ID	Form ID	Offset	Length	
GRUP	-	-	Group: Cell (03479BAF) Temporary Children	00000009	770953	28649	...
GRUP	-	-	Group: Cell (03768E1E) Temporary Children	00000009	761118	9335	...
GRUP	-	-	Group: Cell (038DC9BC) Temporary Children	00000009	761256	9159	...
GRUP	-	-	Group: Cell (03124DF0) Temporary Children	00000009	739388	11500	...
NAVI				00012FB4	474501	264301	...
DIAL			Shout03 - VoicePowers	00013DFE	28424267	79	...
DIAL			Shout02 - VoicePowers	00013DFE	28424745	84	...
DIAL			Shout01b - VoicePowers	00013E00	28425220	86	...
DIAL			Shout01a - VoicePowers	00013E01	28425739	87	...
INFO			Filk.	00068454	28425354	361	...
INFO			Lol.	000684F4	28424877	319	...
INFO			Lo...Sahl	00068526	28424394	327	...
INFO			Filk!	0006884E	28425874	303	...
CELL			SolitudeRedWave	000A1793	2997052	184	...
NAVM				000DEB13	2997484	3878	...
WRLD			WyrmsToothWorld	03000062	4792180	29308	...
CELL	(0, 0)			03000063	4922674	549	...
LAND				03000064	4925355	8772	...
CELL	(-3, -1)			03000069	22910730	546	...
LAND				0300006A	22913792	7565	...
CELL	(-3, 0)			0300006B	17329563	353	...
LAND				0300006C	17338189	14758	...
CELL	(-3, 1)			0300006D	17361539	336	...
LAND				0300006E	17364277	16364	...
CELL			WyrmsToothStonehollow06 (-3, 2)	0300006F	17384847	518	...
LAND				03000070	17394129	13241	...
CELL			WyrmsToothStonehollow07 (-3, 3)	03000071	17413034	485	...
LAND				03000072	17429863	13717	...
CELL	(-2, -1)			03000077	22921995	469	...

Figure 1420 - Accidental edits are gone.

ADDING TEXTURE PATHS TO 3DS MAX

In order to see textures in the 3ds Max viewports, you'll need to add external file paths pointing to the folders containing the textures extracted from the Skyrim .bsa archives.

Go to Customize > Configure User Paths.

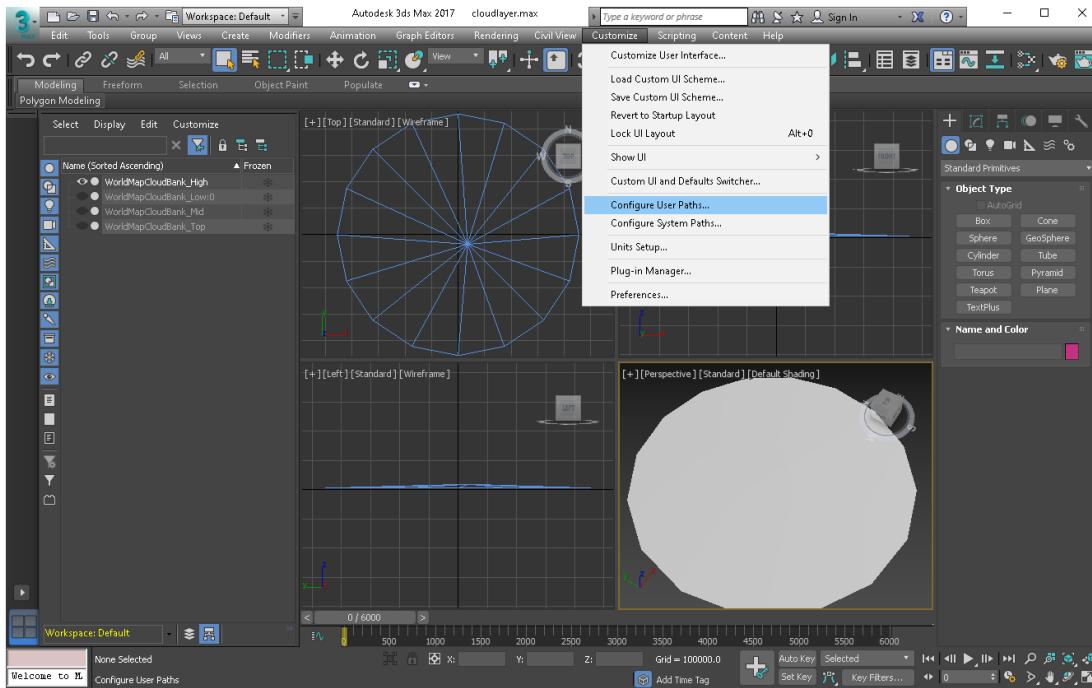


Figure 1421 - Configuring User Paths.

Go to the External Files tab and click on the Add button.

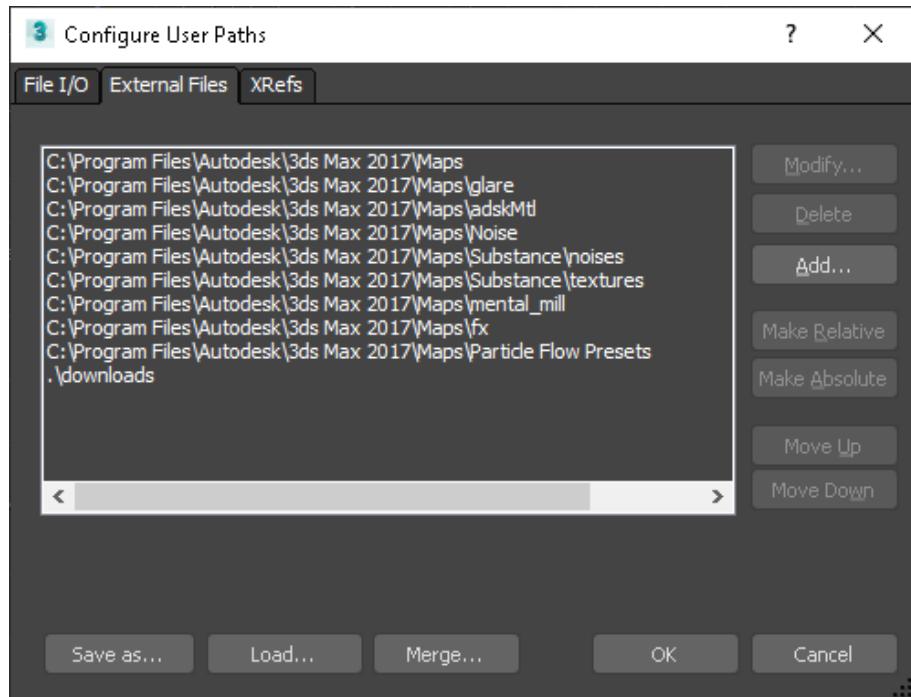


Figure 1422 - Adding a new path for Skyrim textures.

Note: you will need to have exported the textures from the Skyrim .bsa archives first. See [Unpacking the BSA Archives](#) for information on how to export textures from this archive.

Select the root path containing the textures and tick ‘Add Subpaths’.

Click Use Path.

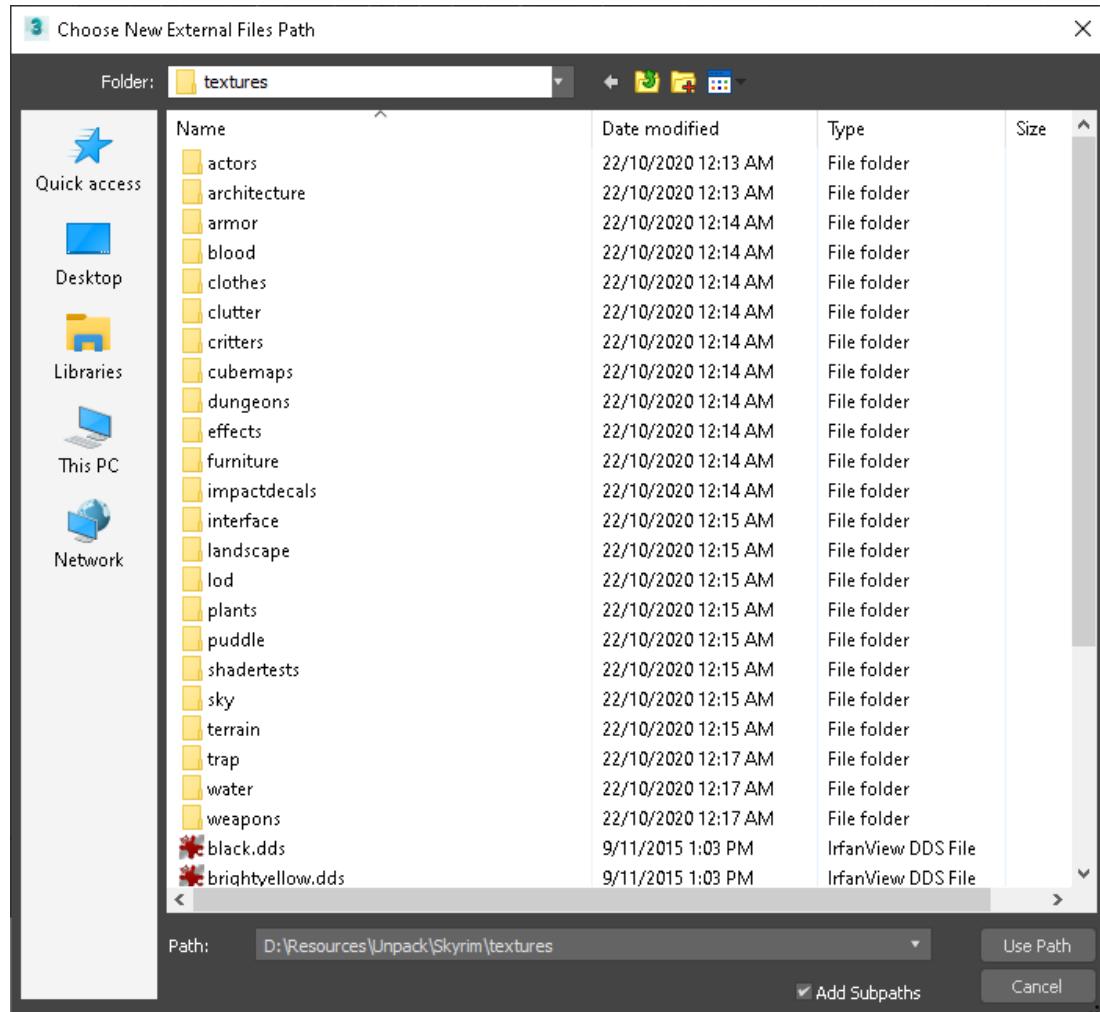


Figure 1423 - Adding all texture subpaths.

Confirm subpaths were automatically added.

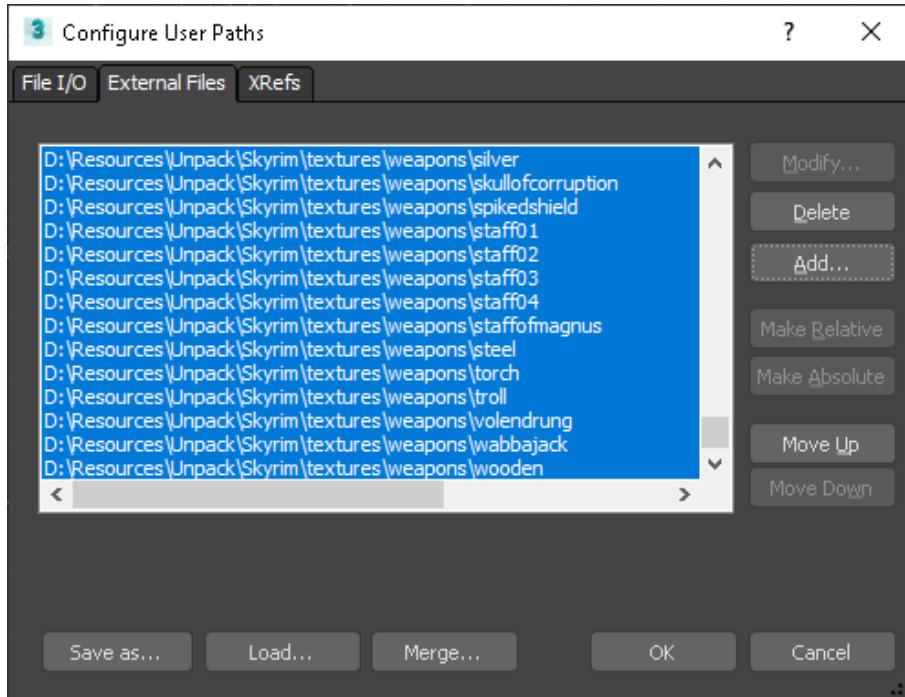


Figure 1424 - All Skyrim texture paths added.

Click OK.

Close 3ds Max and re-open it.

You should now be able to see the cloud texture in the perspective viewport and the problem we need to fix; the textures are now pinching to the central vertex.

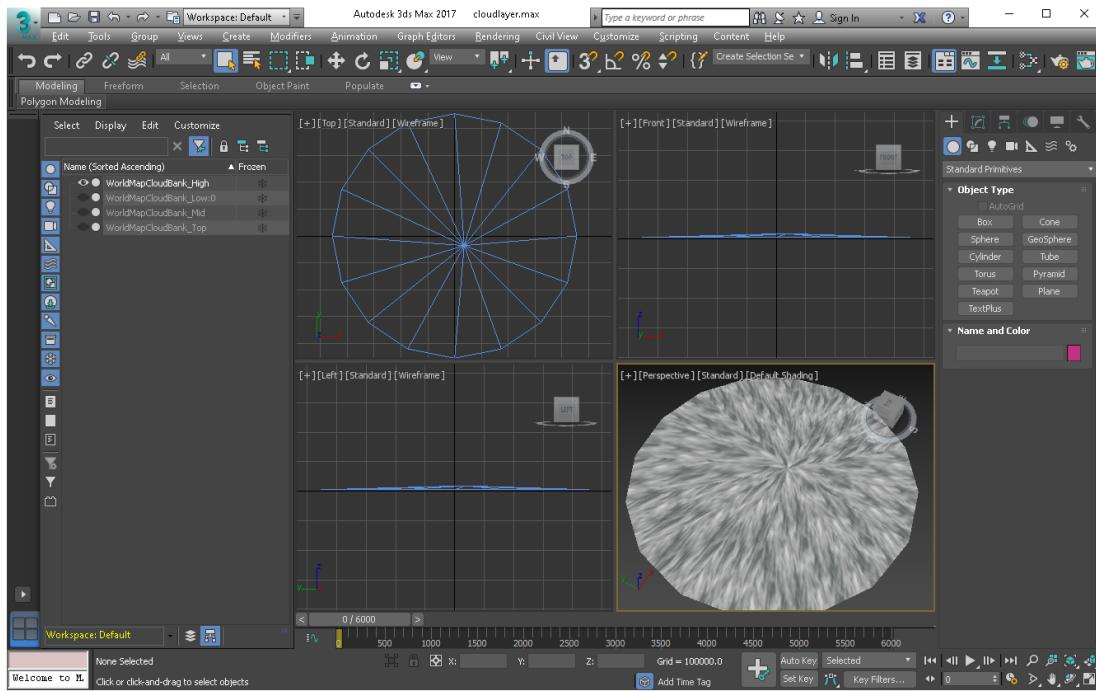


Figure 1425 - Textures are now showing in the perspective viewport.

ADDING TEXTURE PATHS TO NIFSKOPE

Similar to 3ds Max, we need to add texture paths in NifSkope in order to see textures on imported models.

Open NifSkope.

Go to Options > Settings.

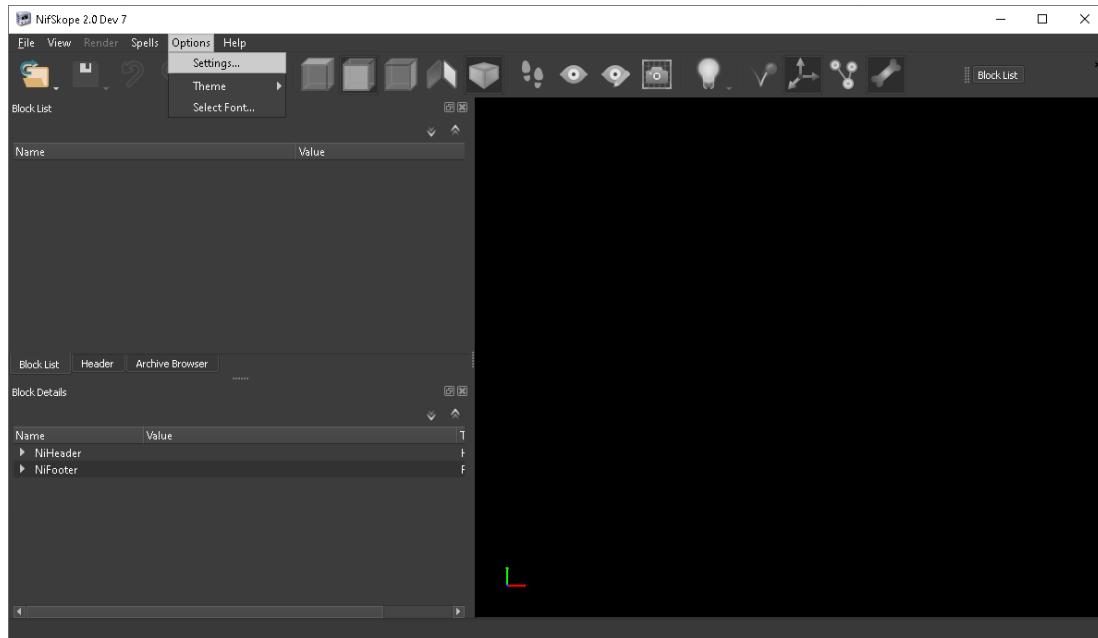


Figure 1426 - Options menu in NifSkope.

Go to the Resources section. Here we can add either a path to loose texture files or link directly to a .bsa archive containing textures.

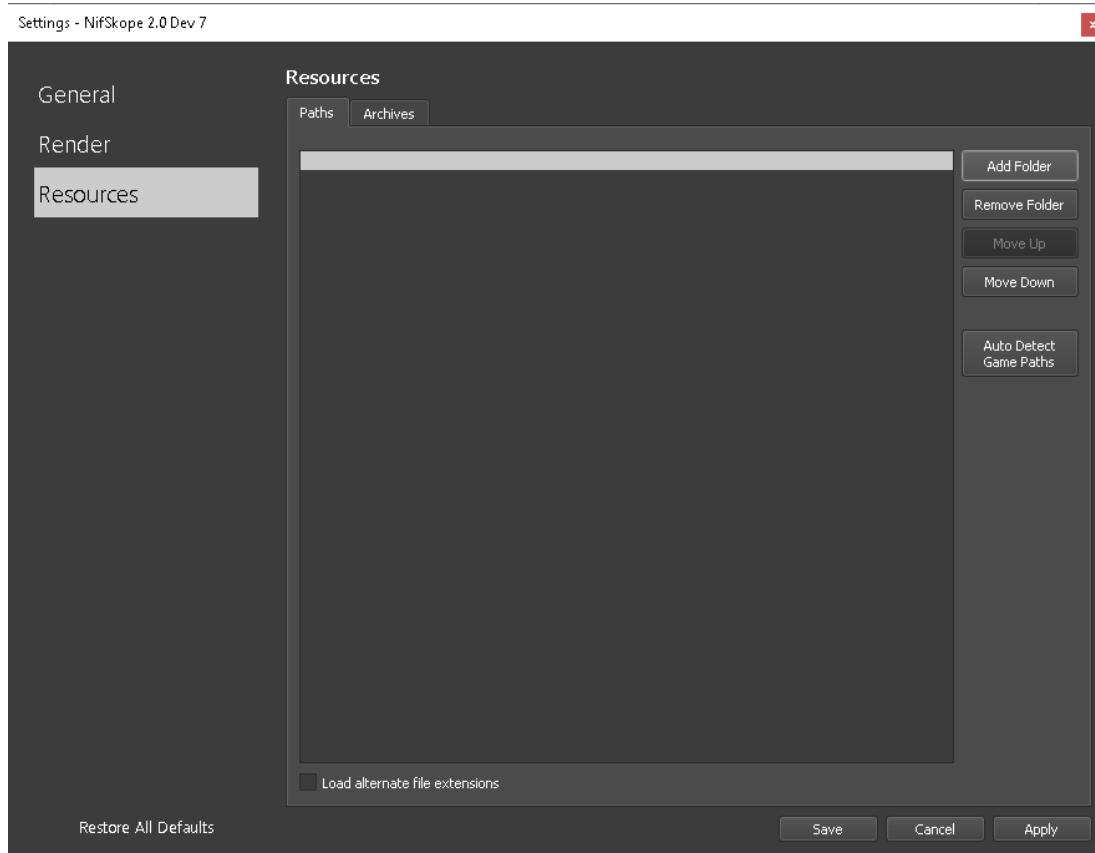


Figure 1427 - Resources.

Let's start by adding a texture path.

On the Paths tab, click Add Folder.

Select the folder path to add to NifSkope and click Select Folder. In the following example I'm going to add the root path containing the texture files for my mod.

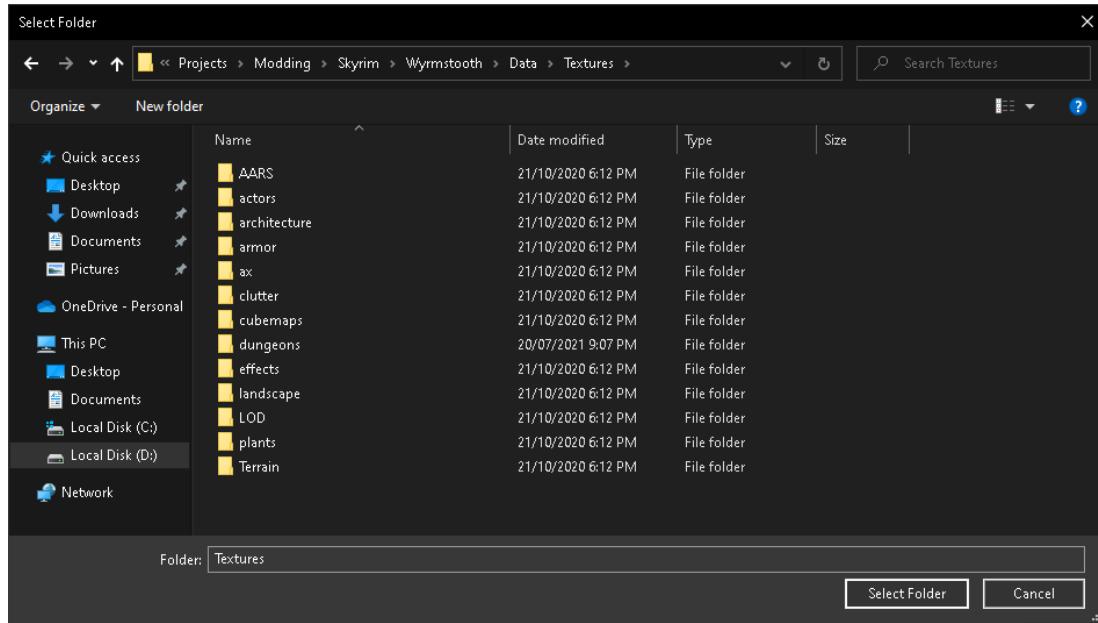


Figure 1428 - Selecting the folder to add to NifSkope.

Confirm that the path has been added to the paths list.

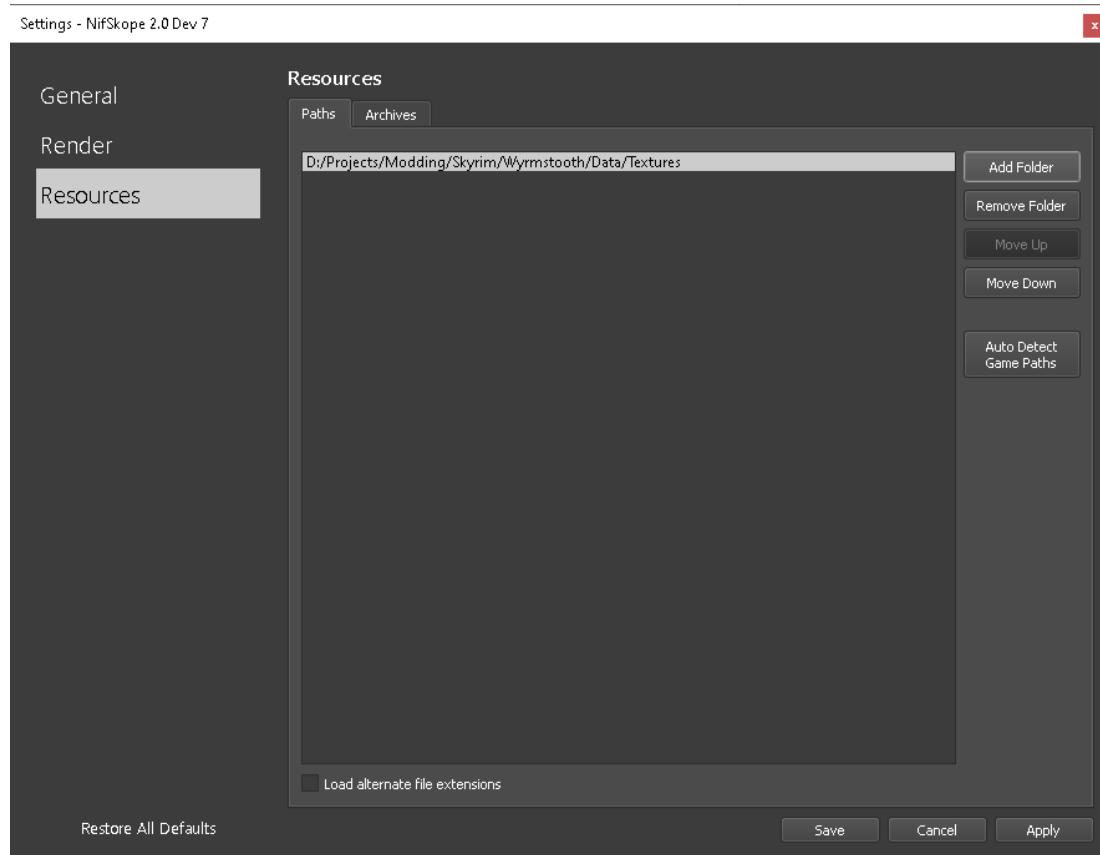


Figure 1429 - Folder path added to NifSkope.

More often than not we're going to want to add a .bsa archive containing the textures.

Go to the Archives tab and click on the Add Archives button.

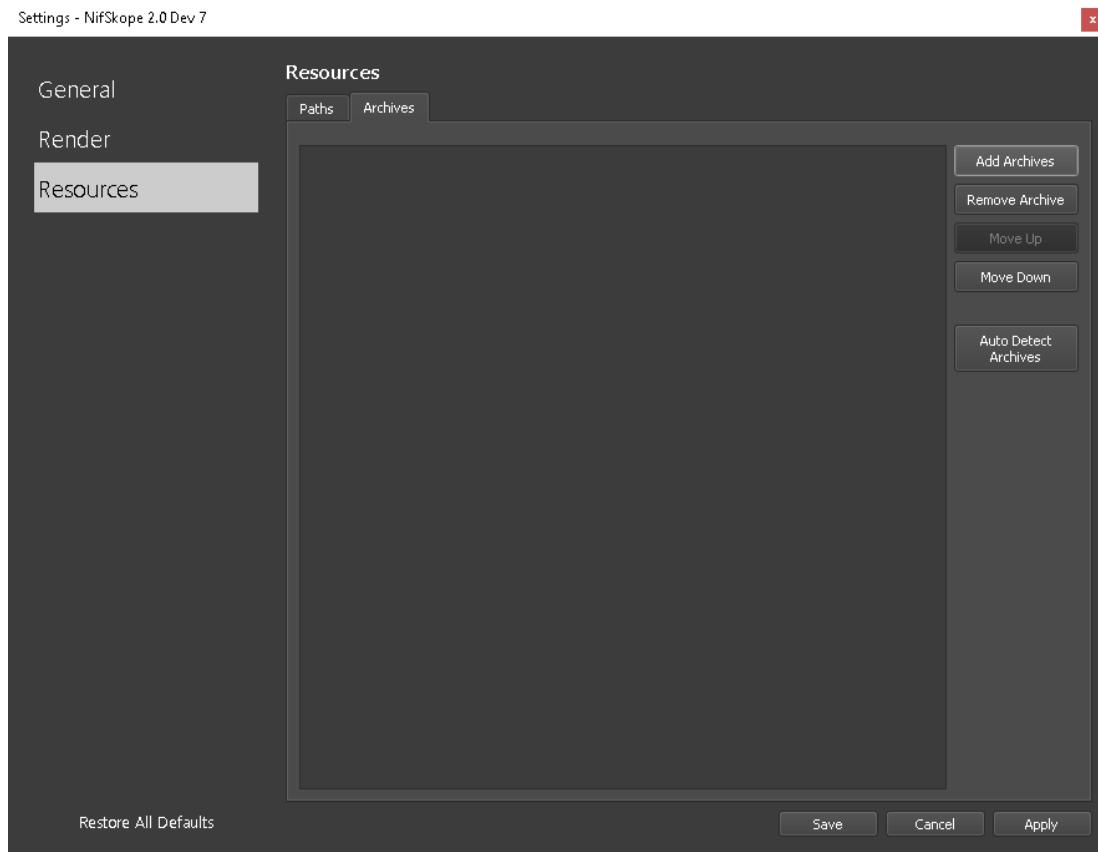


Figure 1430 - Archives tab.

Select a .bsa containing texture files such as Skyrim - Textures.bsa then click Open.

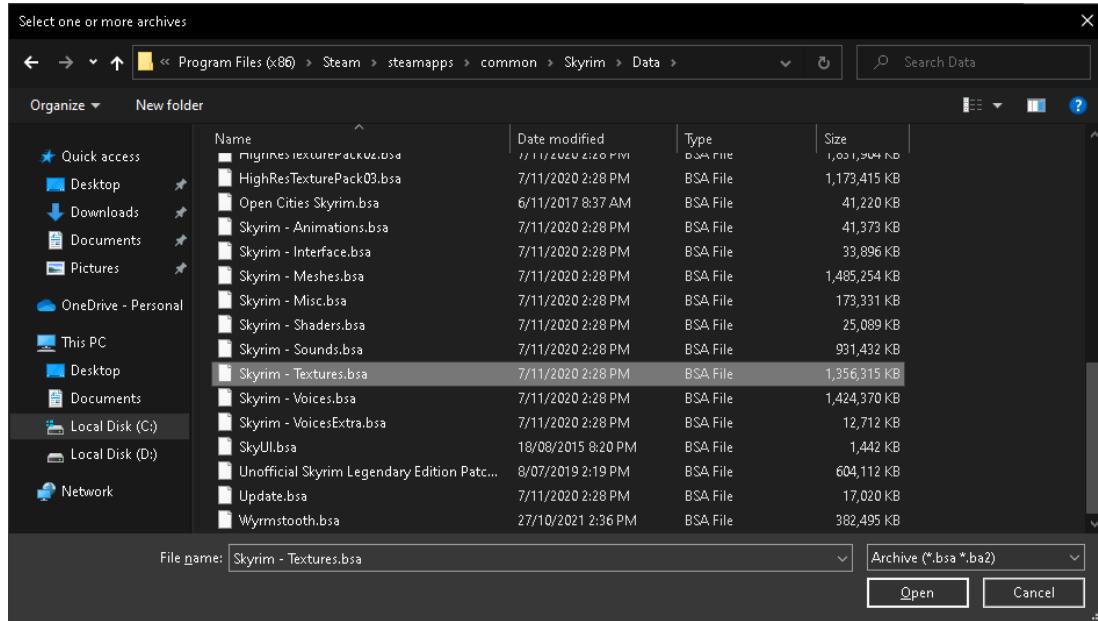


Figure 1431 - Selecting Skyrim - Textures.bsa.

Confirm the .bsa has been added to the archives list.

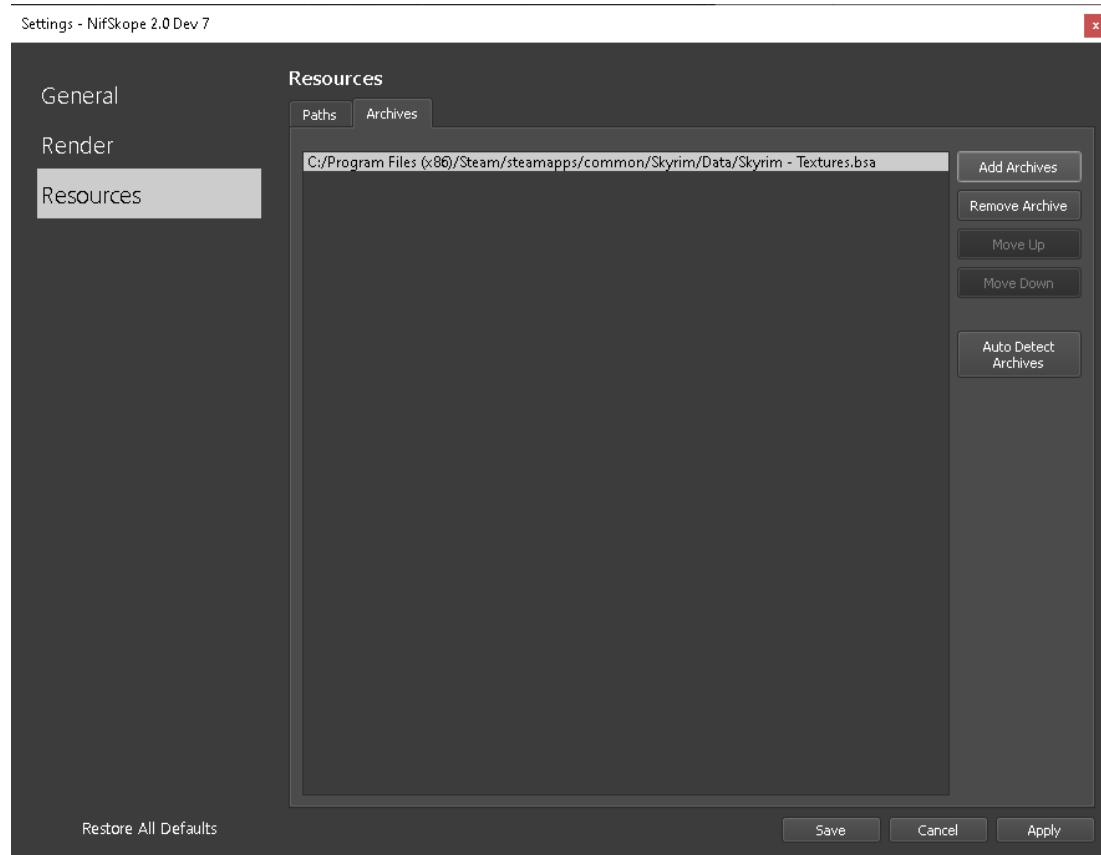


Figure 1432 - .bsa added to NifSkope.

Once you've adding paths and/or .bsa archives, click Save to close out of Settings.

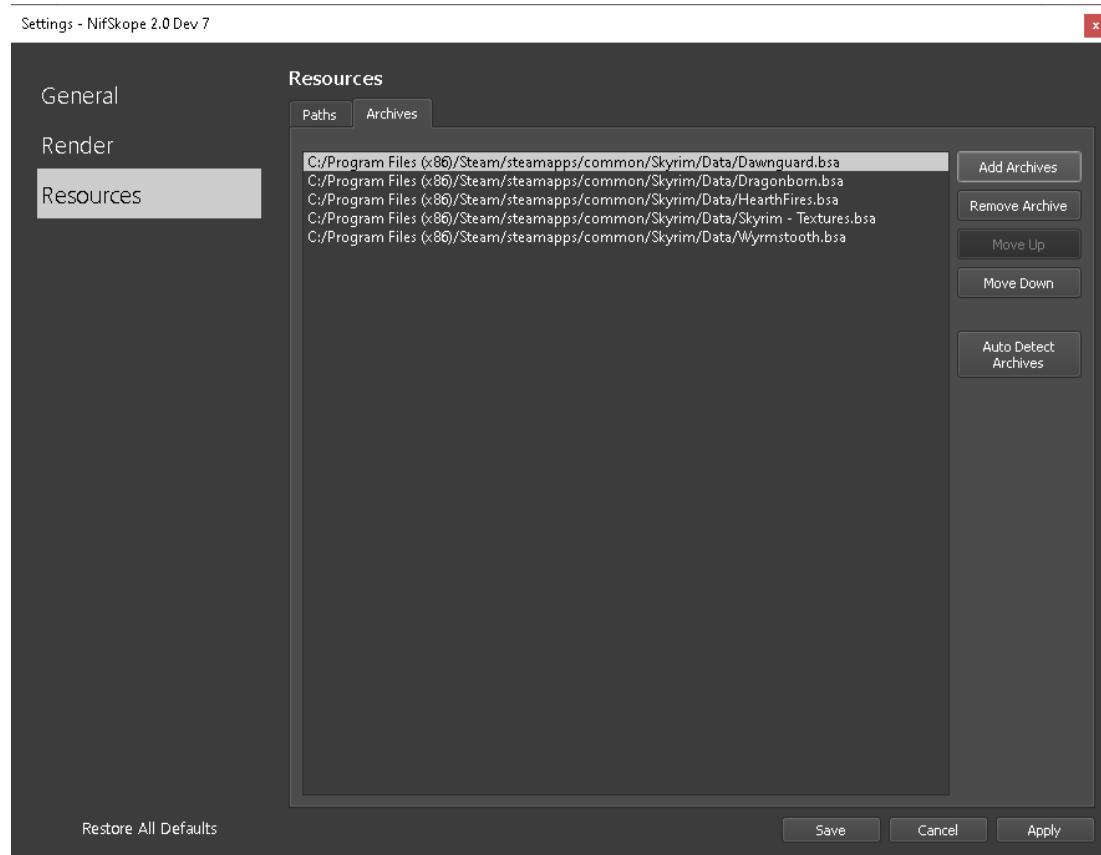


Figure 1433 - More .bsa archives added.

Restart NifSkope and load a .nif file. You should now be able to see its textures.

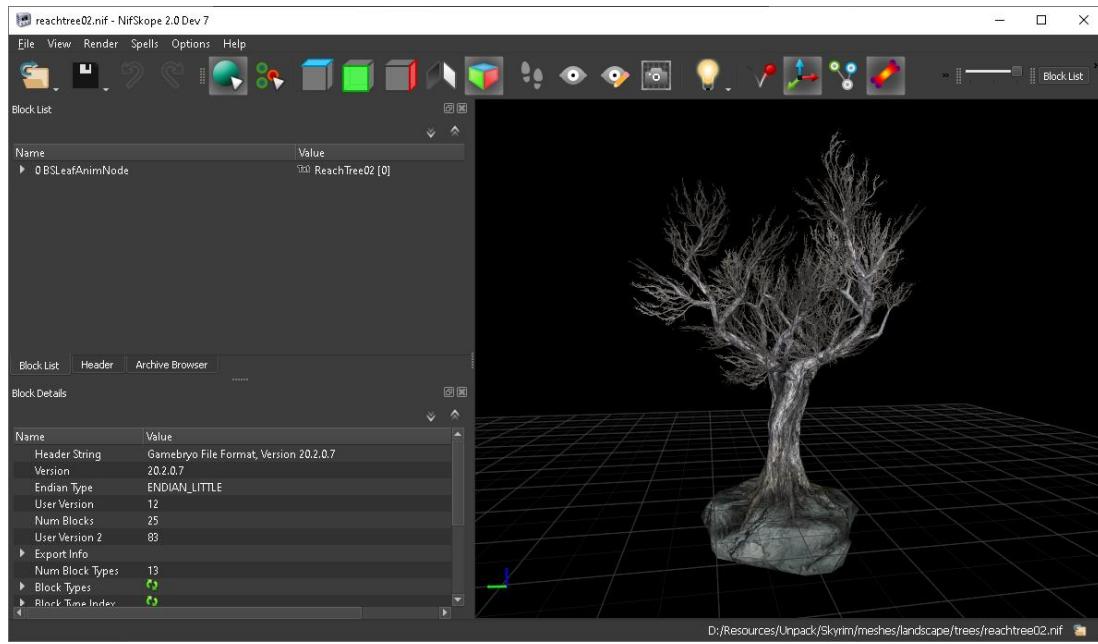


Figure 1434 - Textures shown on imported .nif.

OPTIMIZING INTERIOR CELLS WITH ROOMBOUNDS

We can optimize the performance of an interior cell with roombounds. Roombounds allow us to hide and show parts of an interior cell based on what the player has line-of-sight to.

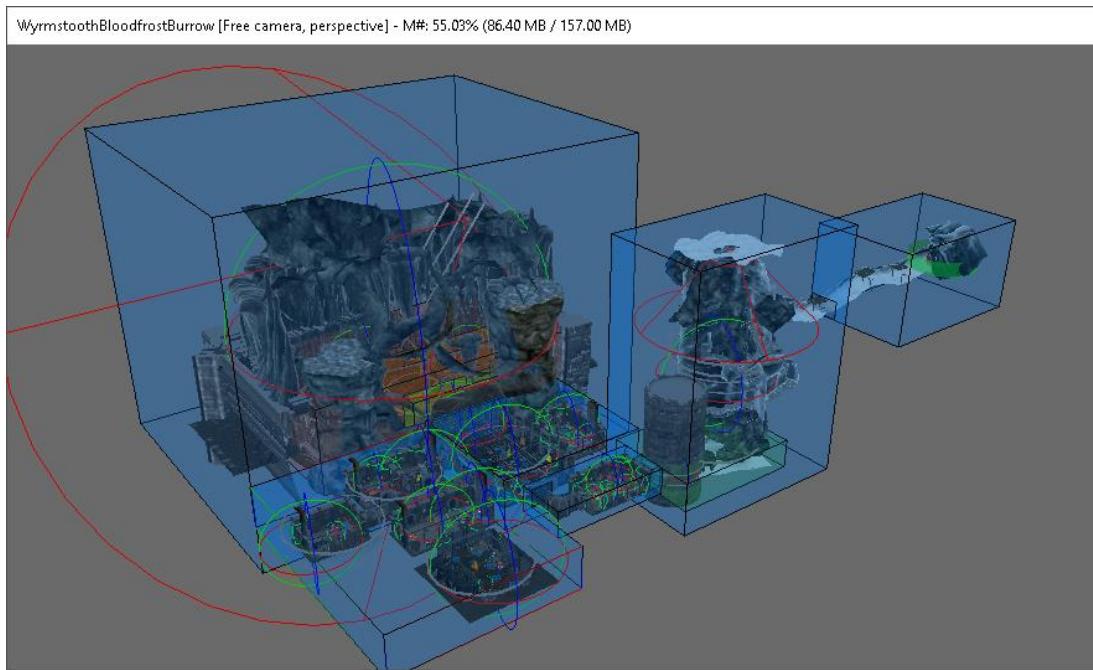


Figure 1435 - Roombounds in a dungeon.

As per the screenshot above, we can encapsulate a room or collection of rooms in a roombound and link them together using portals.

Important: You will need to ensure all parts of your interior are in a roombound and that each roombound is linked to another via a portal or parts of your dungeon may not be visible to the player.

Press 'M' to toggle markers. By default, roombounds won't be shown so you'll need to go to View > Show/Hide Window and tick 'Portals and Rooms'.

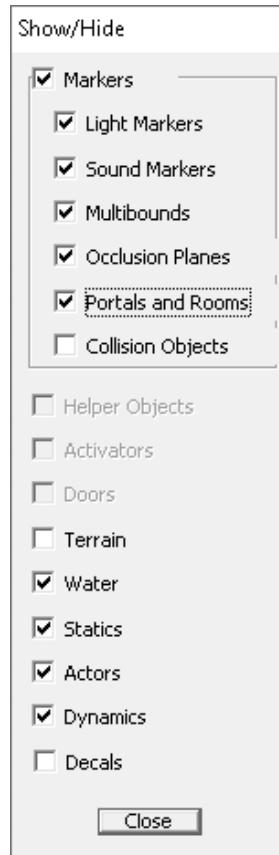


Figure 1436 - Portals and Rooms ticked.

Click Close.

To add a roombound, select a part of your interior's tileset and click on the 'Create a Roombound' button in the toolbar.

You should see a blue box appear in the render window. The resize gizmo should also be toggled on allowing you to resize it. If it isn't, you can toggle it on by pressing '2'.

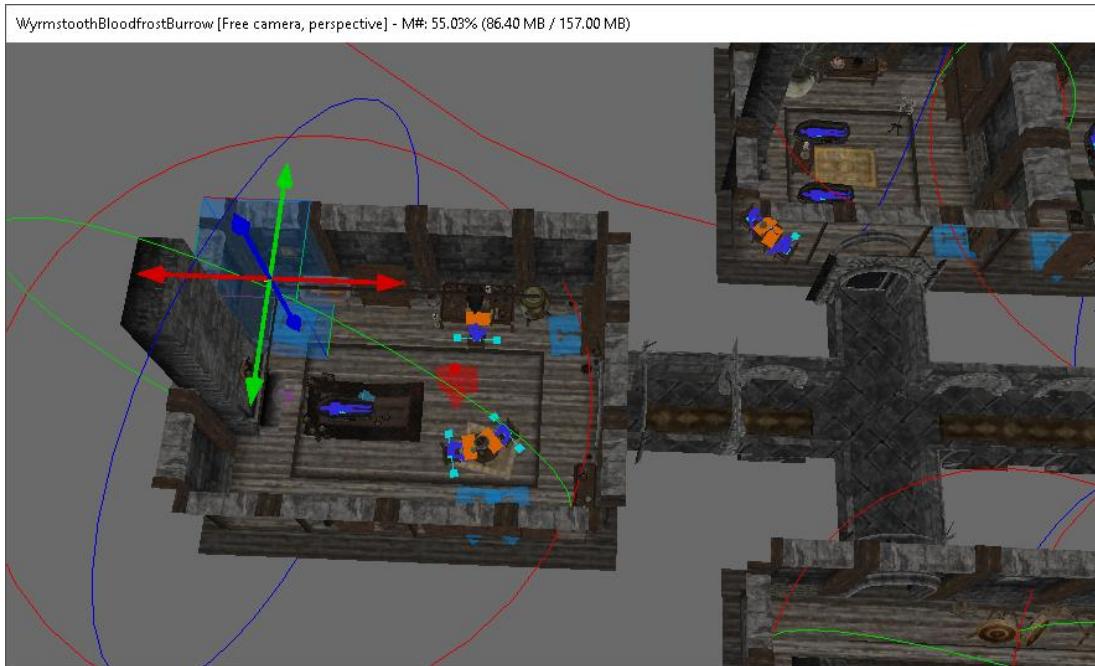


Figure 1437 - Adding a roombound.

Use the resize gizmo to resize the roombound to cover a portion of your dungeon.

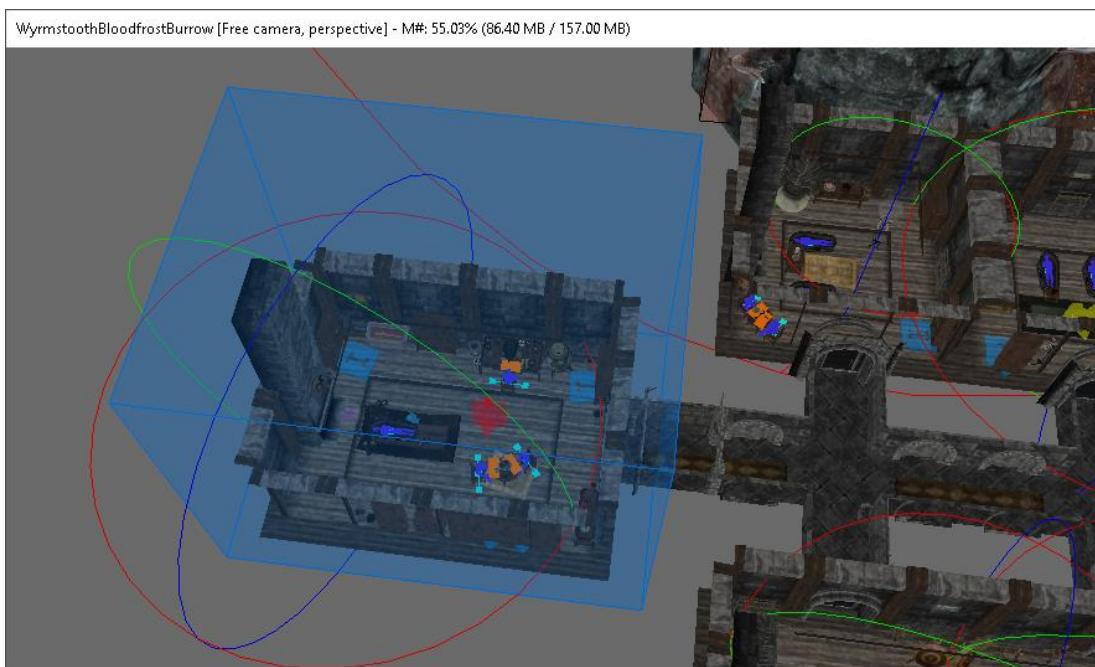


Figure 1438 - Roombound resized.

Important: What's in or out of a roombound is determined by an object's pivot point.

For example, the corner selected in the screenshot below is inside of the roombound.

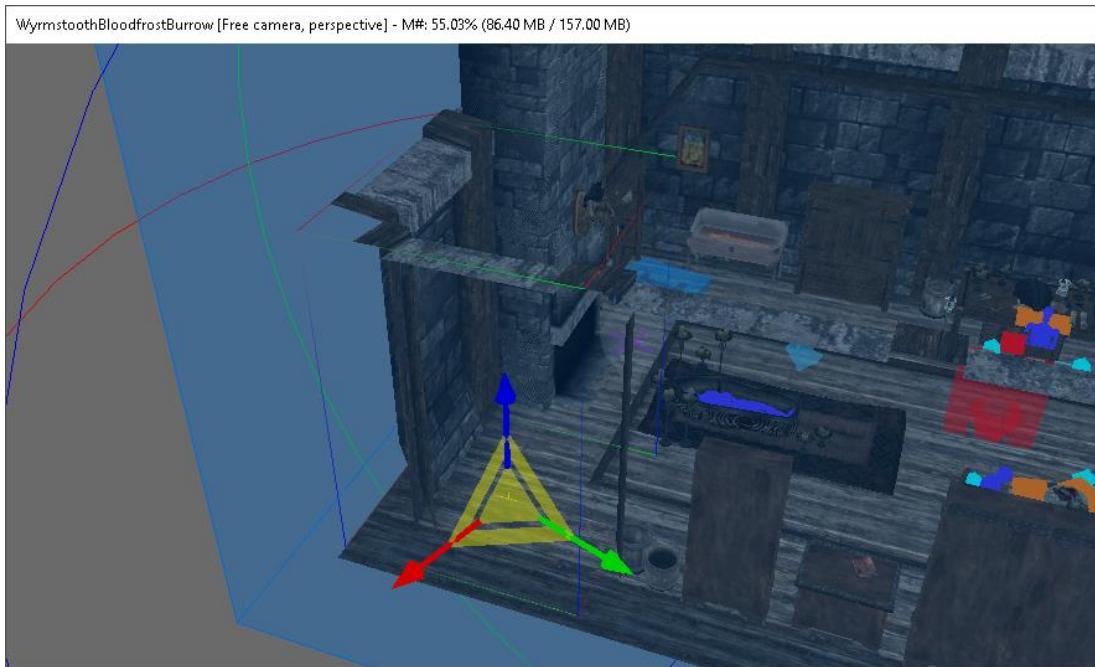


Figure 1439 - An object inside of the roombound.

Repeat this step to add more roombounds to cover the rest of your interior.

Note: It doesn't matter at this stage if they overlap or not.

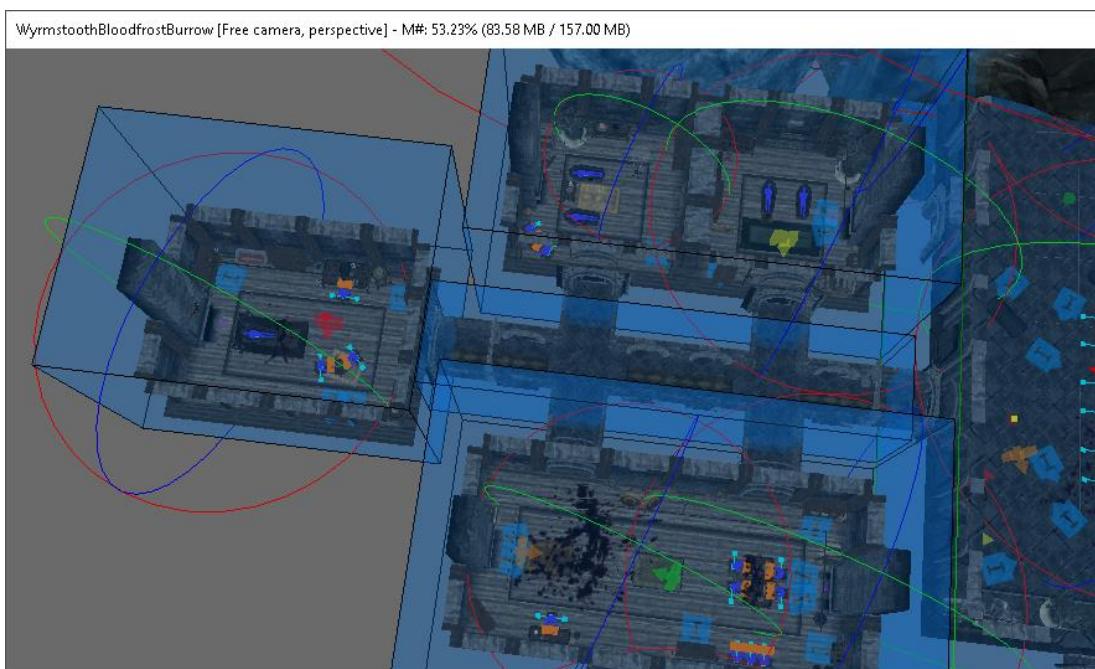


Figure 1440 - More roombounds added.

We can join two roombounds together using portals.

Select the first roombound to add a portal to.

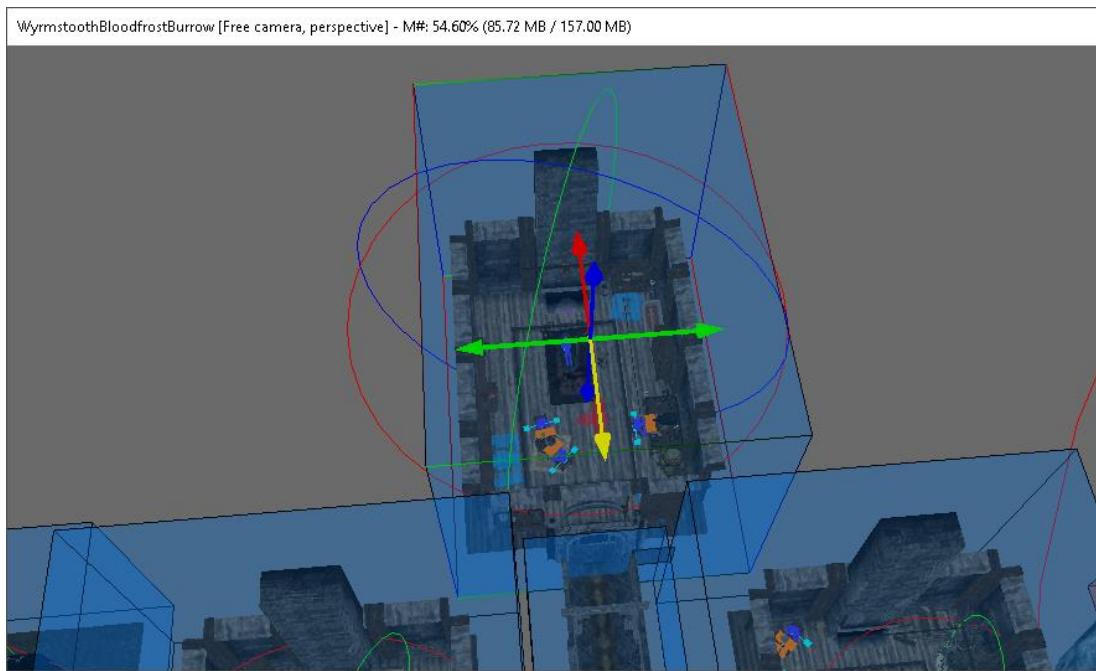


Figure 1441 - Roombound selected.

Click on the 'Create a Portal' button in the toolbar and click on the selected roombound in the render window.

Important: You need to click on the side of the roombound you want to add a portal to.

The portal should appear as a flat 2-dimensional gray rectangle.

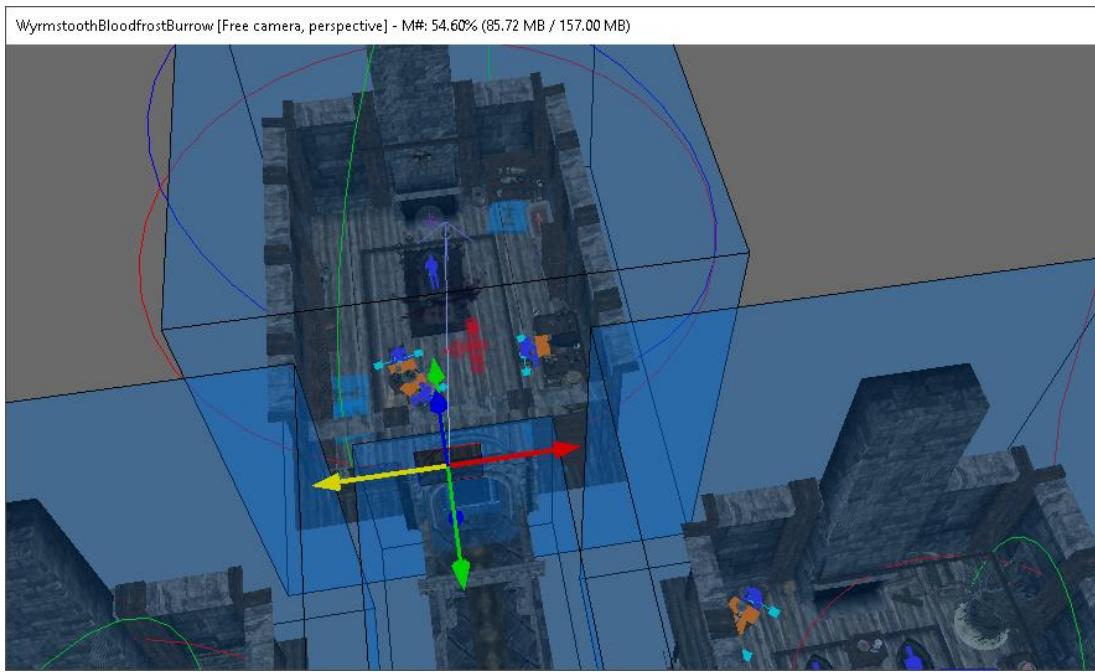


Figure 1442 - Portal added to roombound.

In the screenshot above we can see that the portal was automatically linked to the topmost roombound. Next, we'll need to link it to the roombound below it to link both roombounds together.

With the portal still selected, CTRL-click on the roombound you want to connect it to.

Important: You should have both the portal and the roombound selected.

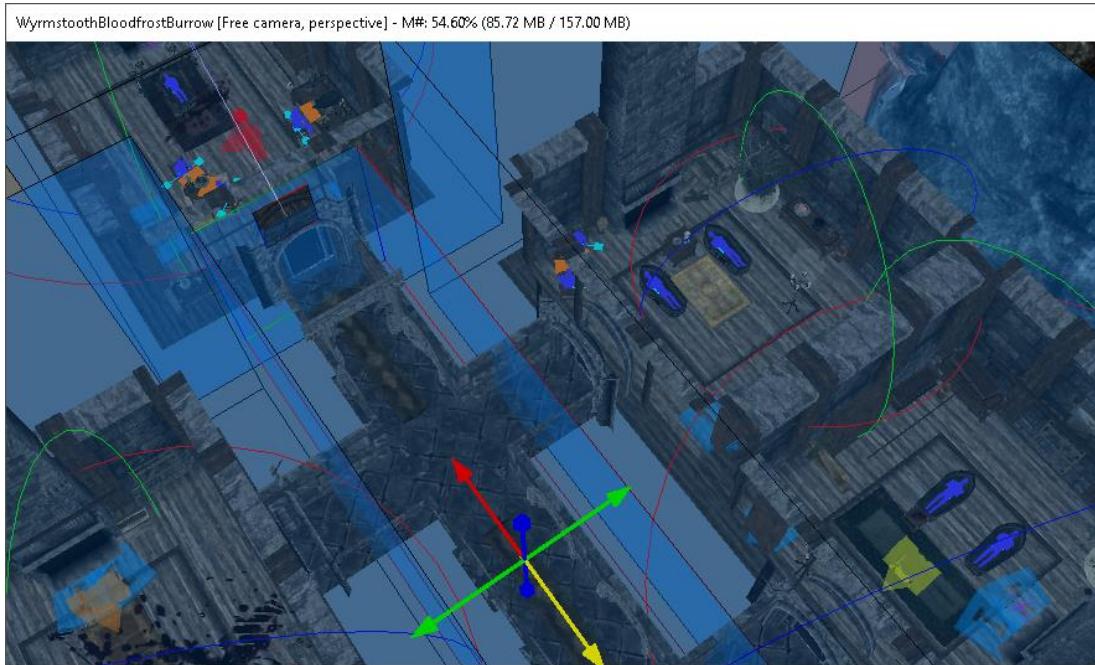


Figure 1443 - Selecting the roombound and portal to connect.

Click on the 'Link Portal to Room' button in the toolbar. The white/blue arrow on the portal should now be pointing to both roombounds.

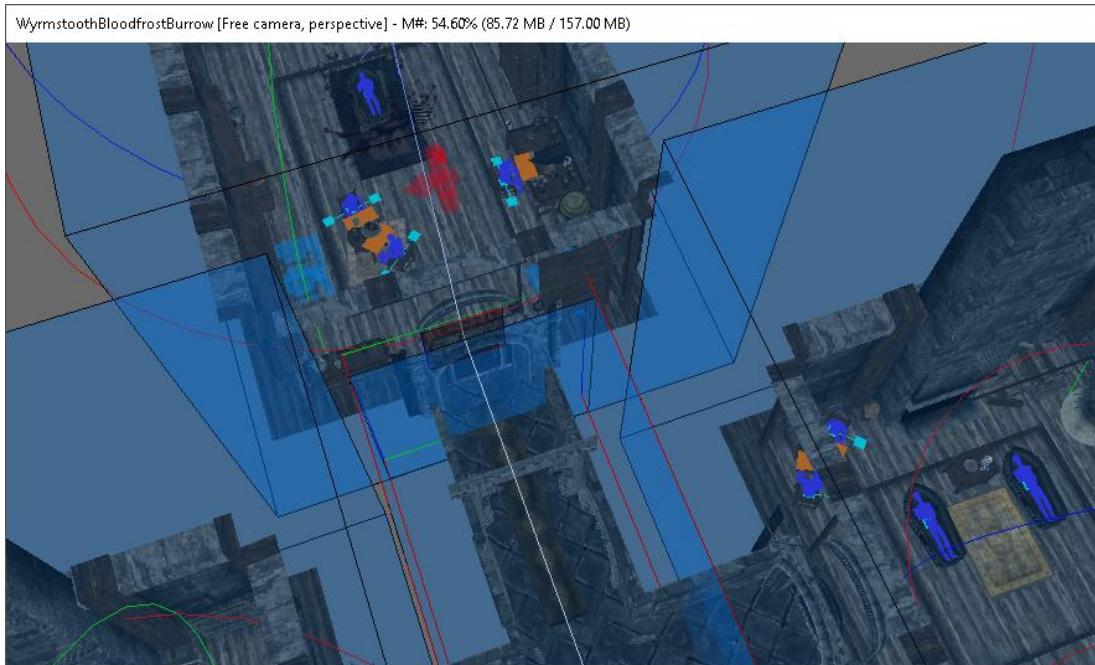


Figure 1444 - Connecting the portal to the selected roombound.

Note: Clicking on the 'Enter Portal Mode' button in the toolbar prevents you from selecting anything else in the render window except portal objects.

Select the portal object.

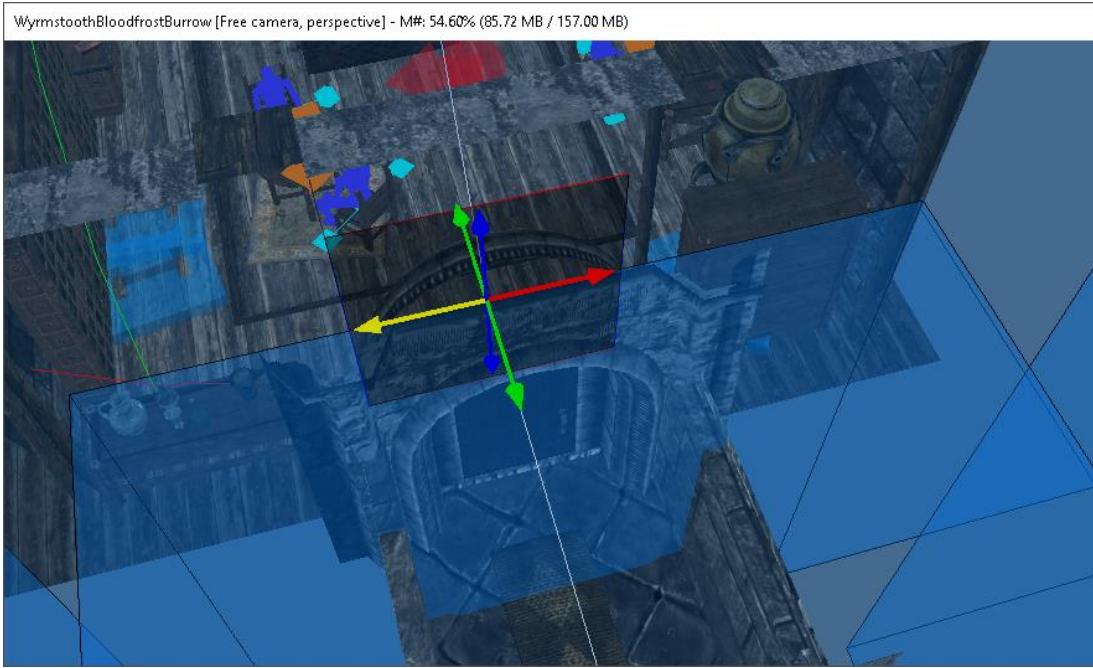


Figure 1445 - Selecting the portal object.

Use the resize gizmo to scale the portal just outside the bounds of the passageway.

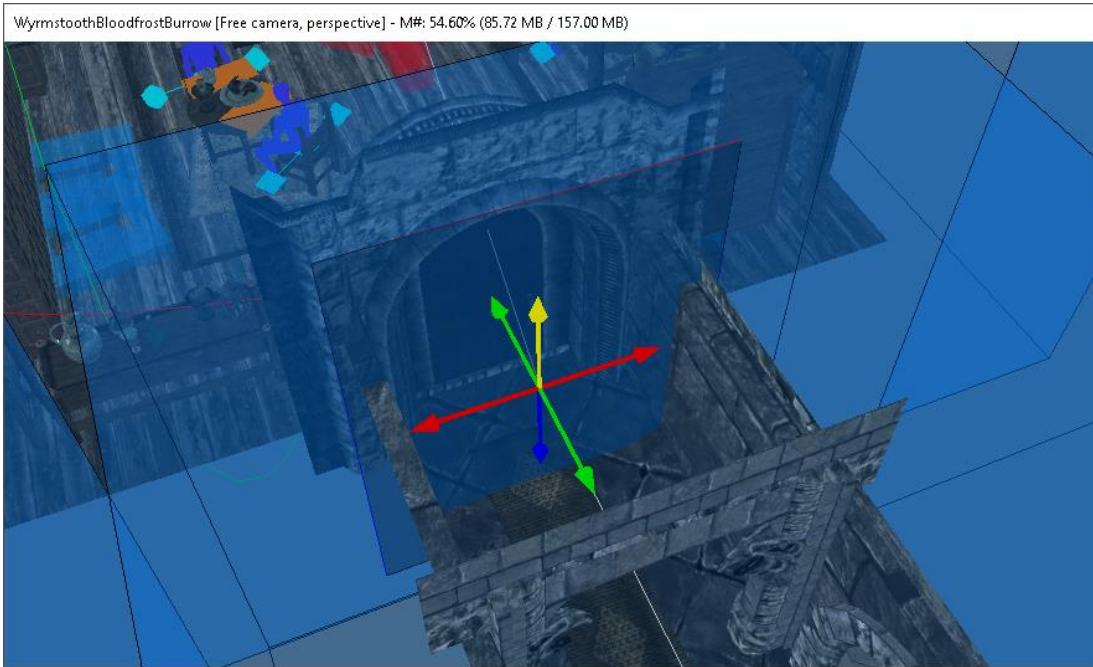


Figure 1446 - Portal resized.

Here's a screenshot of the portal from within the passageway:

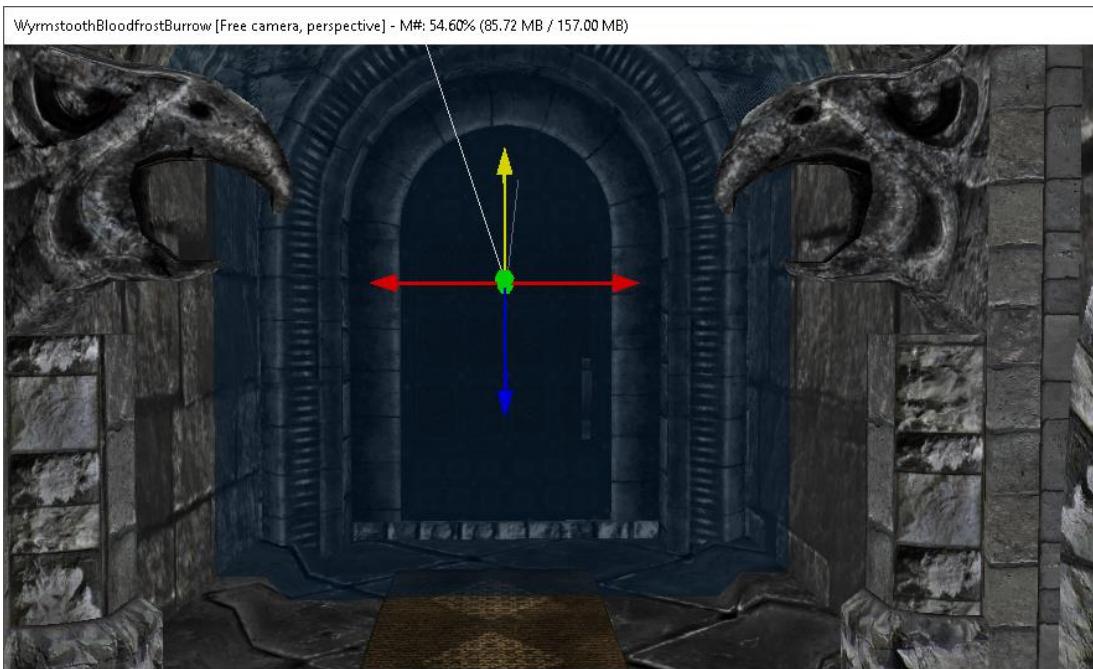


Figure 1447 - Portal from inside the passageway.

Important: When you linked the roombound to the portal you may have noticed that the side of the roombound facing the portal was moved to sit flush with it, automatically removing the gap if there was one.

After linking a roombound to a portal do not move either roombounds or the portal or you will need to delete and relink the portal.

Sometimes the portal will be created along the wrong edge as per the screenshot below:

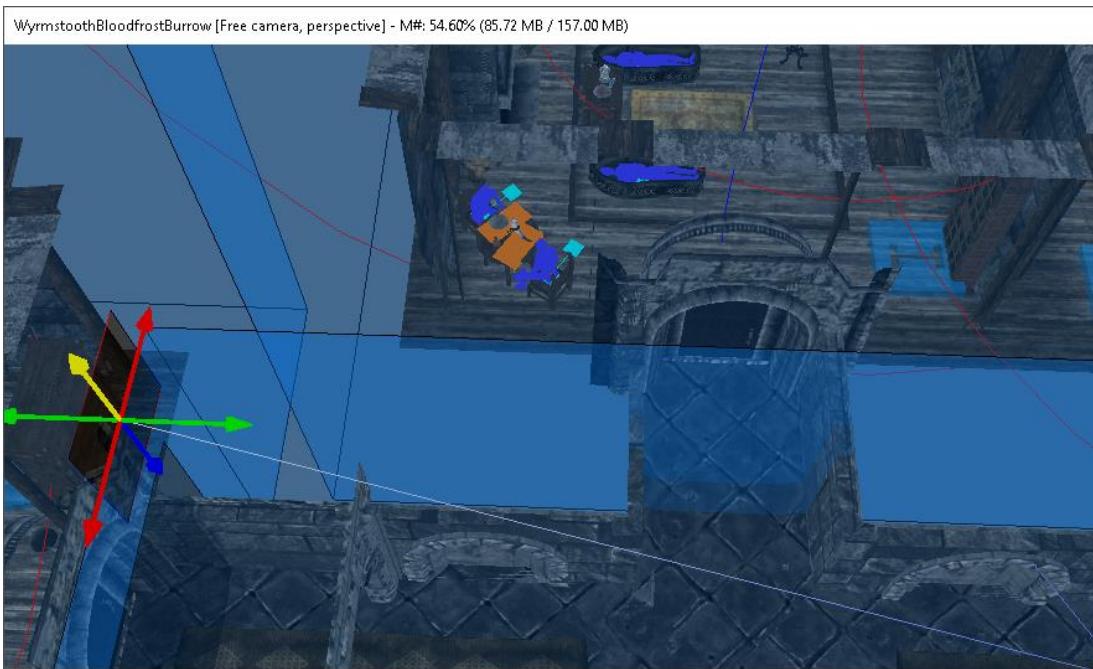


Figure 1448 - Portal created along the wrong edge.

To correct this, click on the ‘Snap to Angle’ and ‘Local gizmo orientation’ buttons in the toolbar to toggle them both on and rotate the portal to face the right direction.

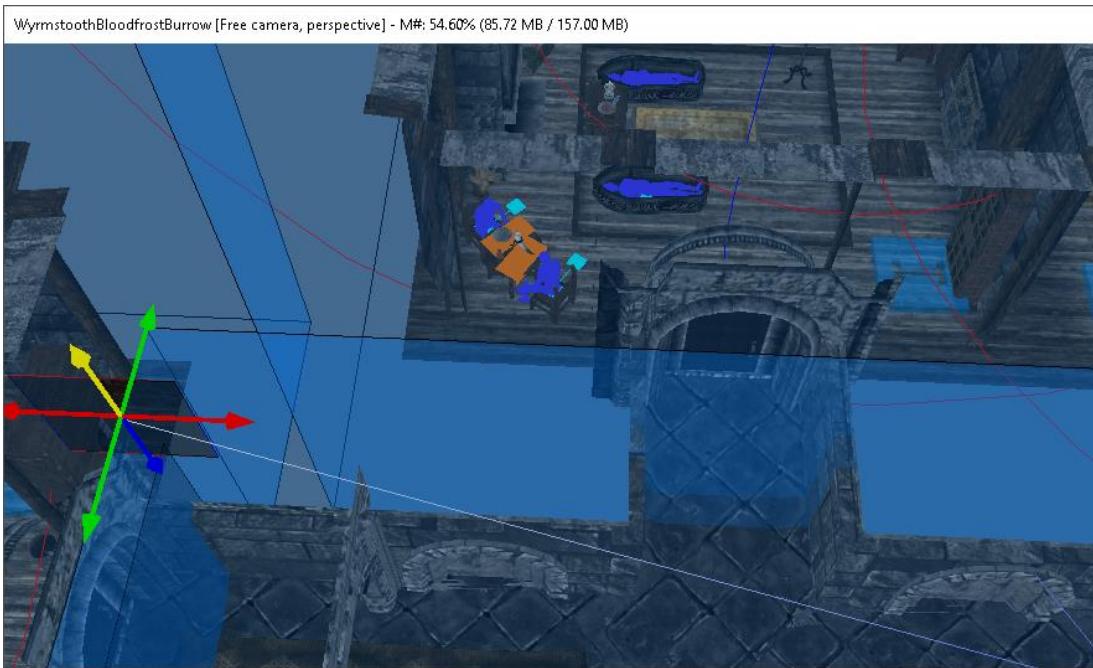


Figure 1449 - Portal rotated.

Then use the resize gizmo to move it into position and resize it to cover the width and height of the hallway.

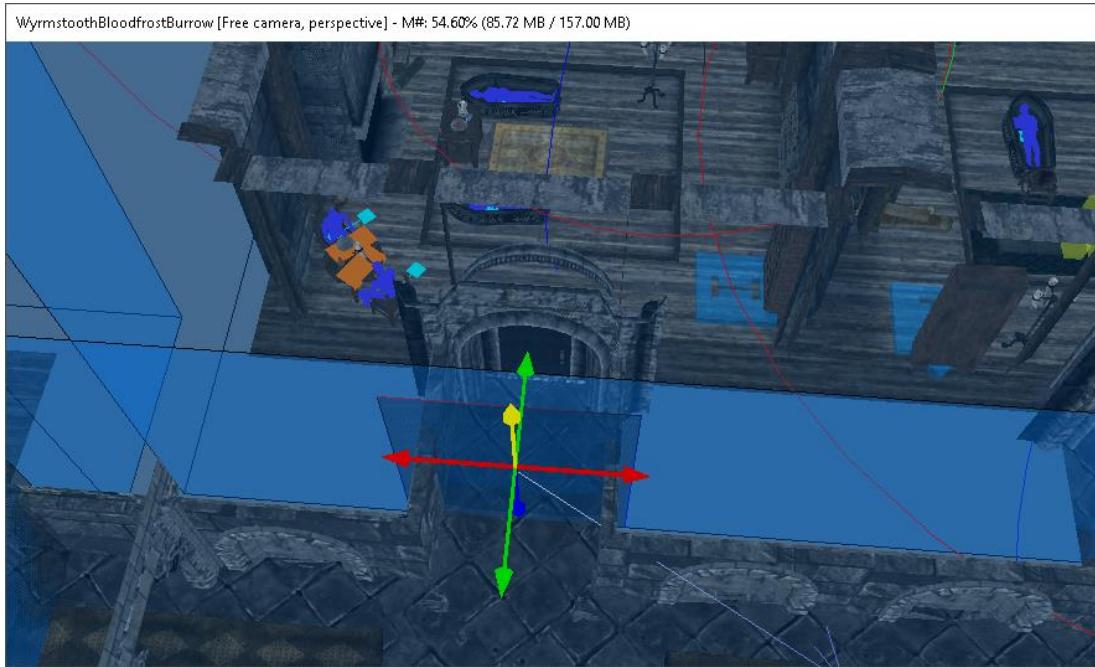


Figure 1450 - Portal moved into position.

And here it is linked to the roombound above it.

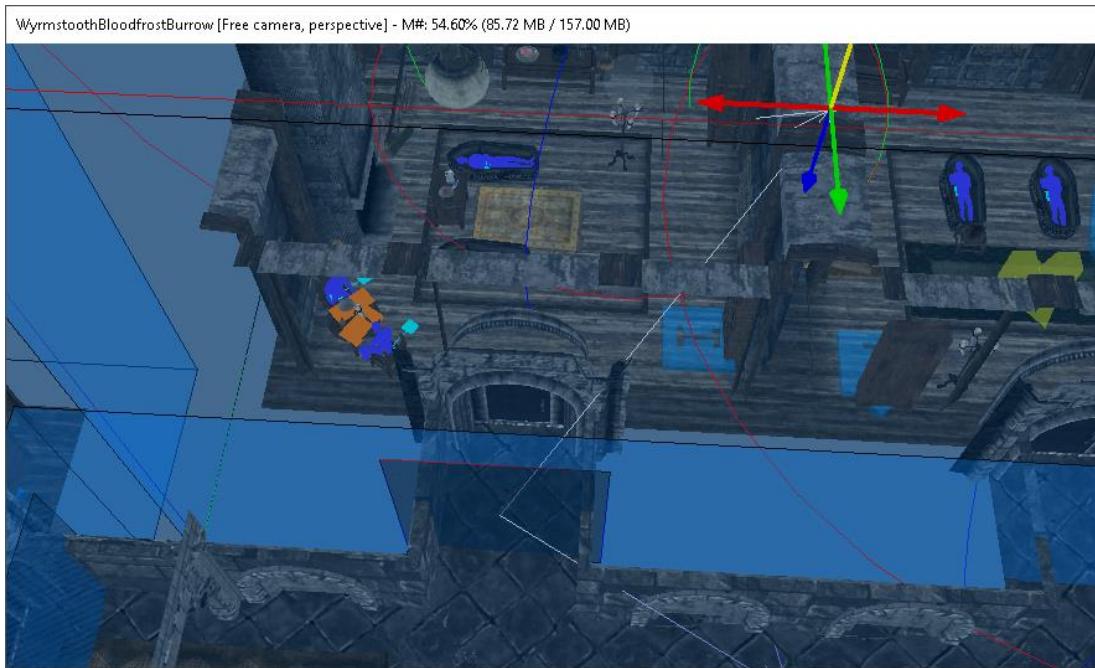


Figure 1451 - Portal linked to another roombound.

Portals can be duplicated as per the screenshot below to cover multiple passageways to a room:

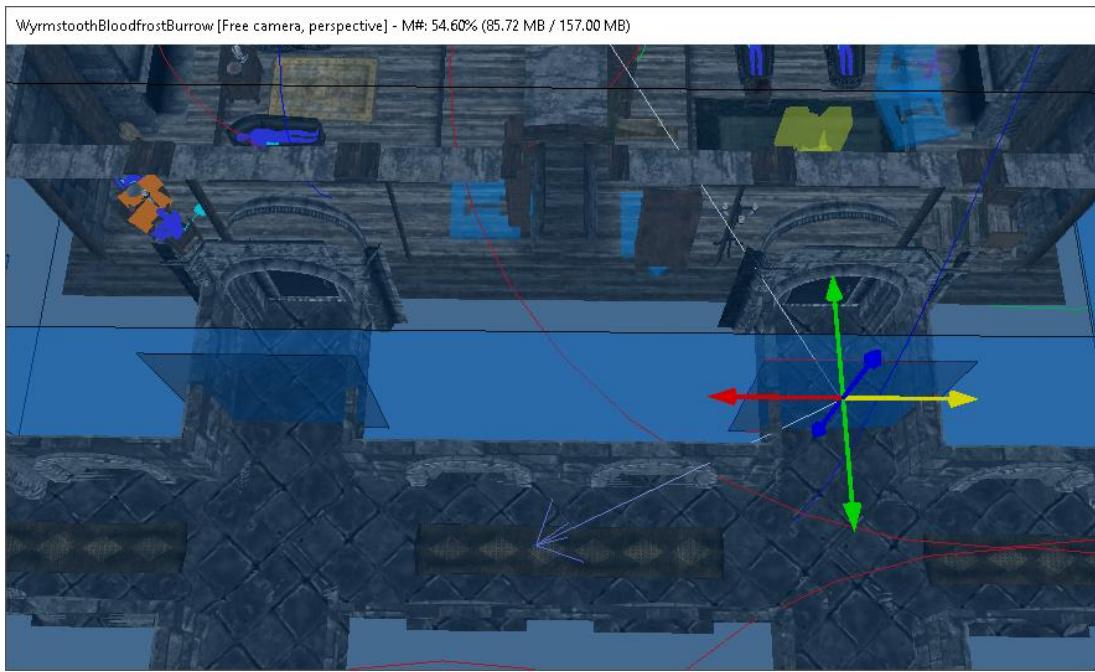


Figure 1452 - Duplicating portals.

Repeat these steps to link the rest of the roombounds to portals.

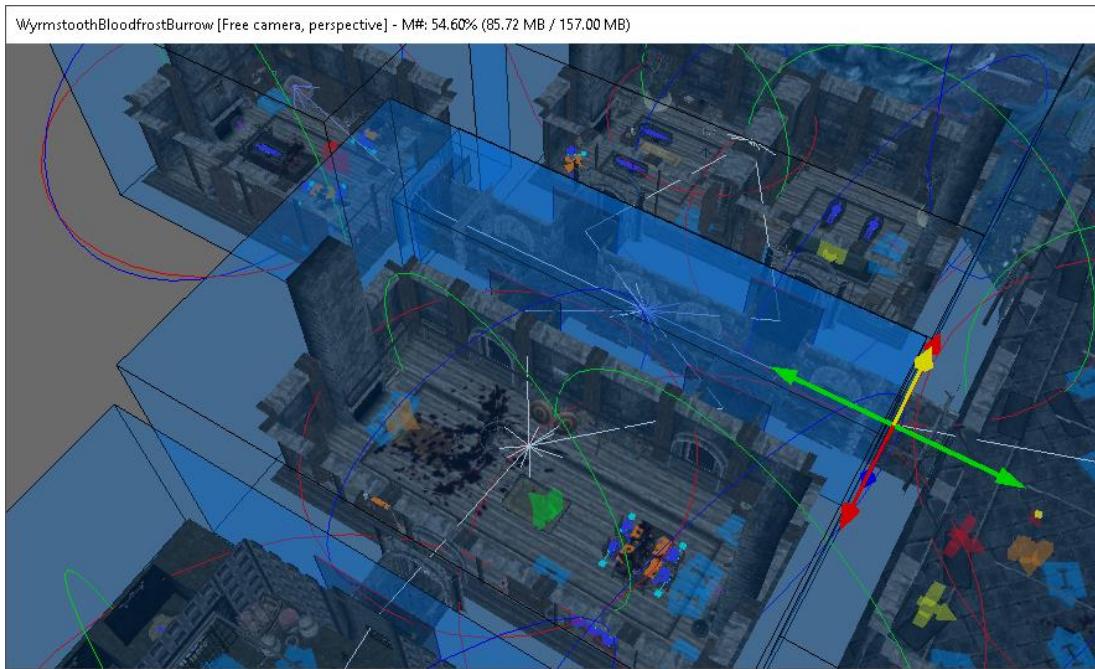
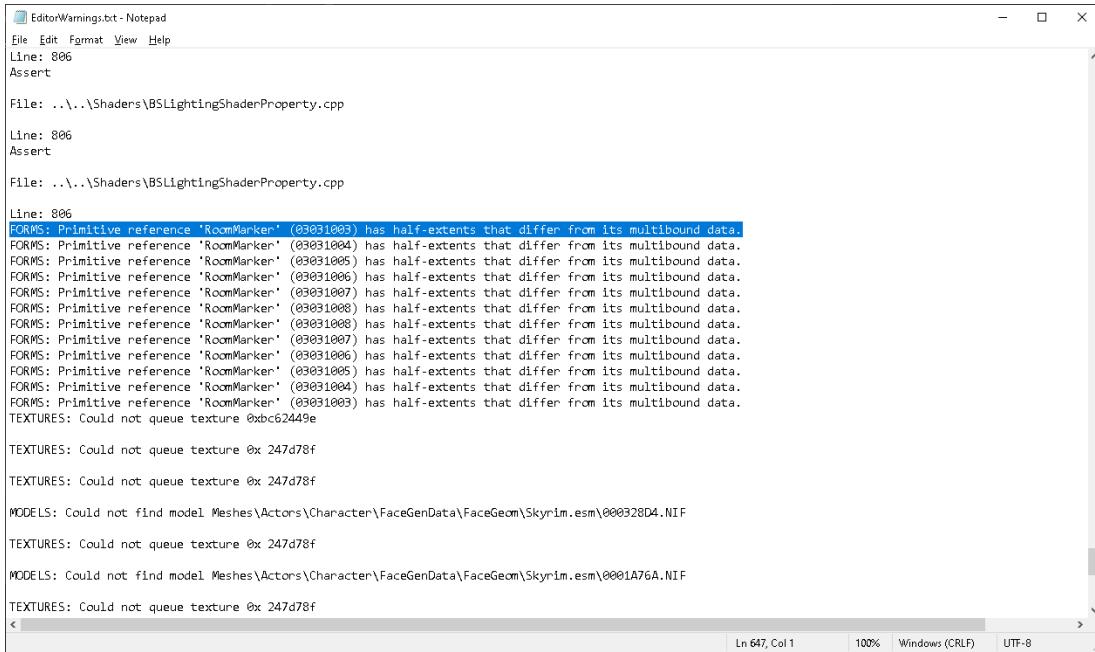


Figure 1453 - Roombounds linked together.

When working with roombounds, I would strongly recommend keeping an eye on your EditorWarnings.txt file.

You can find this file in your Skyrim or Skyrim Special Edition installation folder.



```

EditorWarnings.txt - Notepad
File Edit Format View Help
Line: 806
Assert
File: ..\Shaders\BSLightingShaderProperty.cpp
Line: 806
Assert
File: ..\Shaders\BSLightingShaderProperty.cpp
Line: 806
FORMS: Primitive reference 'RoomMarker' (0x031003) has half-extents that differ from its multibound data.
FORMS: Primitive reference 'RoomMarker' (0x031004) has half-extents that differ from its multibound data.
FORMS: Primitive reference 'RoomMarker' (0x031005) has half-extents that differ from its multibound data.
FORMS: Primitive reference 'RoomMarker' (0x031006) has half-extents that differ from its multibound data.
FORMS: Primitive reference 'RoomMarker' (0x031007) has half-extents that differ from its multibound data.
FORMS: Primitive reference 'RoomMarker' (0x031008) has half-extents that differ from its multibound data.
FORMS: Primitive reference 'RoomMarker' (0x031009) has half-extents that differ from its multibound data.
FORMS: Primitive reference 'RoomMarker' (0x031007) has half-extents that differ from its multibound data.
FORMS: Primitive reference 'RoomMarker' (0x031006) has half-extents that differ from its multibound data.
FORMS: Primitive reference 'RoomMarker' (0x031004) has half-extents that differ from its multibound data.
FORMS: Primitive reference 'RoomMarker' (0x031003) has half-extents that differ from its multibound data.
TEXTURES: Could not queue texture 0xb6c62449e
TEXTURES: Could not queue texture 0x247d78f
TEXTURES: Could not queue texture 0x247d78f
MODELS: Could not find model Meshes\Actors\Character\FaceGenData\FaceGeom\Skyrim.esm\000328D4.NIF
TEXTURES: Could not queue texture 0x247d78f
MODELS: Could not find model Meshes\Actors\Character\FaceGenData\FaceGeom\Skyrim.esm\0001A76A.NIF
TEXTURES: Could not queue texture 0x247d78f

```

Figure 1454 - EditorWarnings.txt.

If you spot a warning that says ‘FORMS: Primitive reference ‘RoomMarker’ (<Ref ID>) has half-extents that differ from its multibound data.’ you may need to delete and recreate any portals attached to that roombound.

If that doesn’t fix the issue, you may have to go so far as to delete the roombound and recreate it.

VERSION CONTROL AND MERGING CHANGES

Version control allows multiple developers to work on the same master file by merging changes from separate .esp files.

Go to your Skyrim or Skyrim Special Edition installation folder.

Create a new folder called Merging.

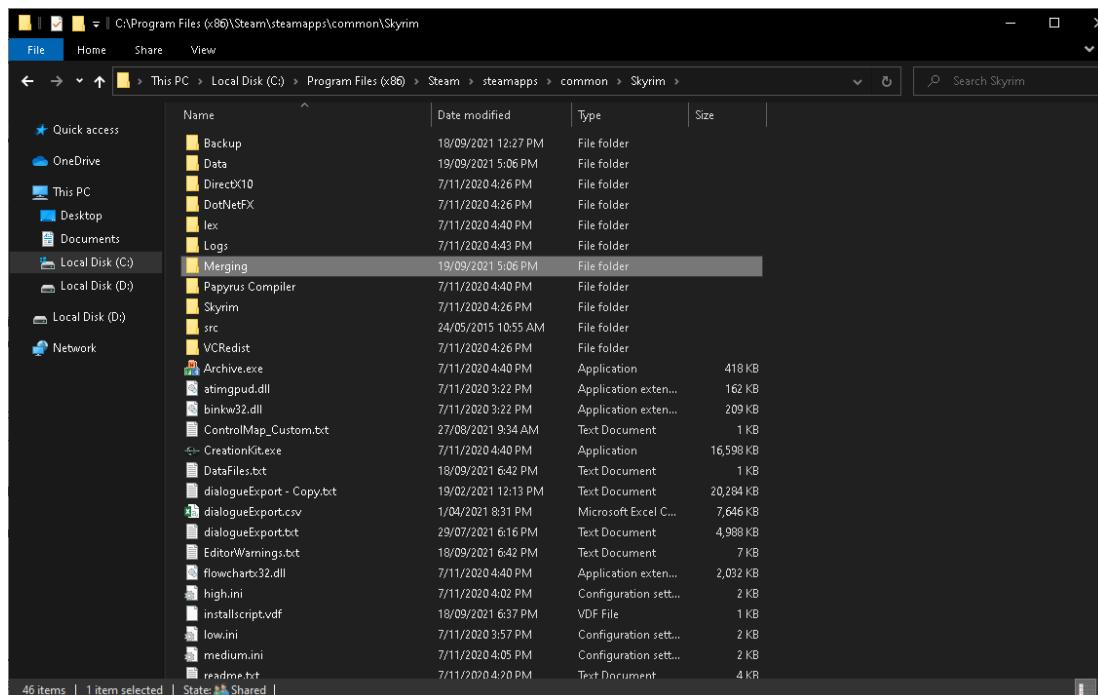


Figure 1455 - Merging folder.

In the Merging folder, create two folders: Data and VersionBackup.

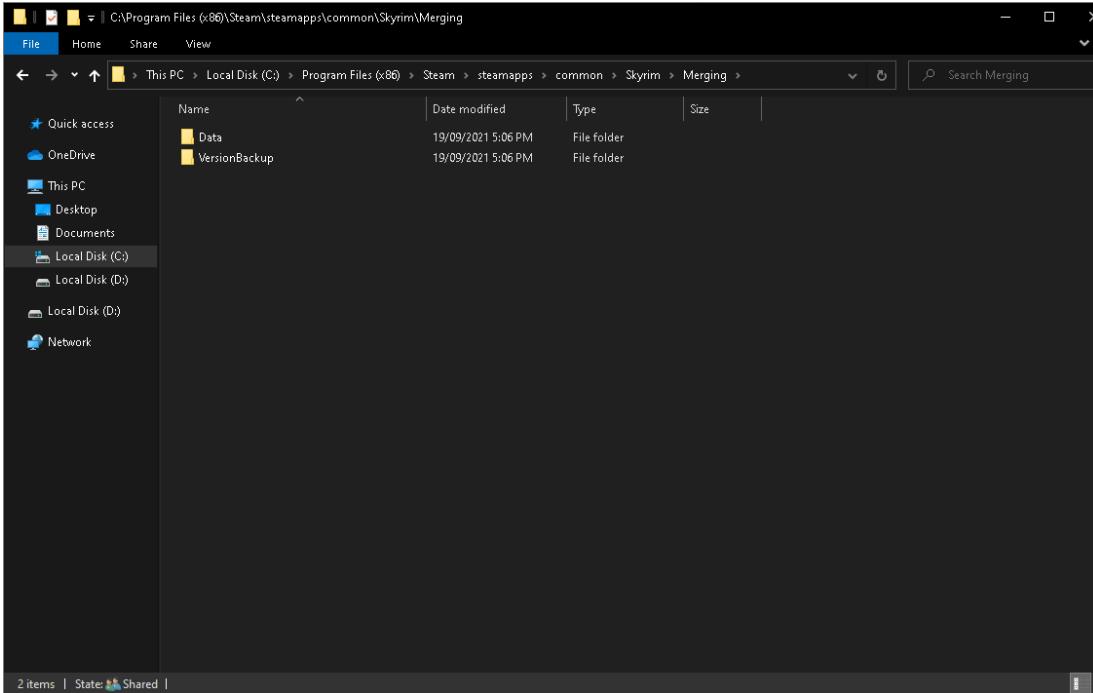


Figure 1456 - Data and VersionBackup folders.

Now go to your Skyrim\Data or Skyrim Special Edition\Data folder. In the Data folder, create a new folder called 'CheckInBackup'.

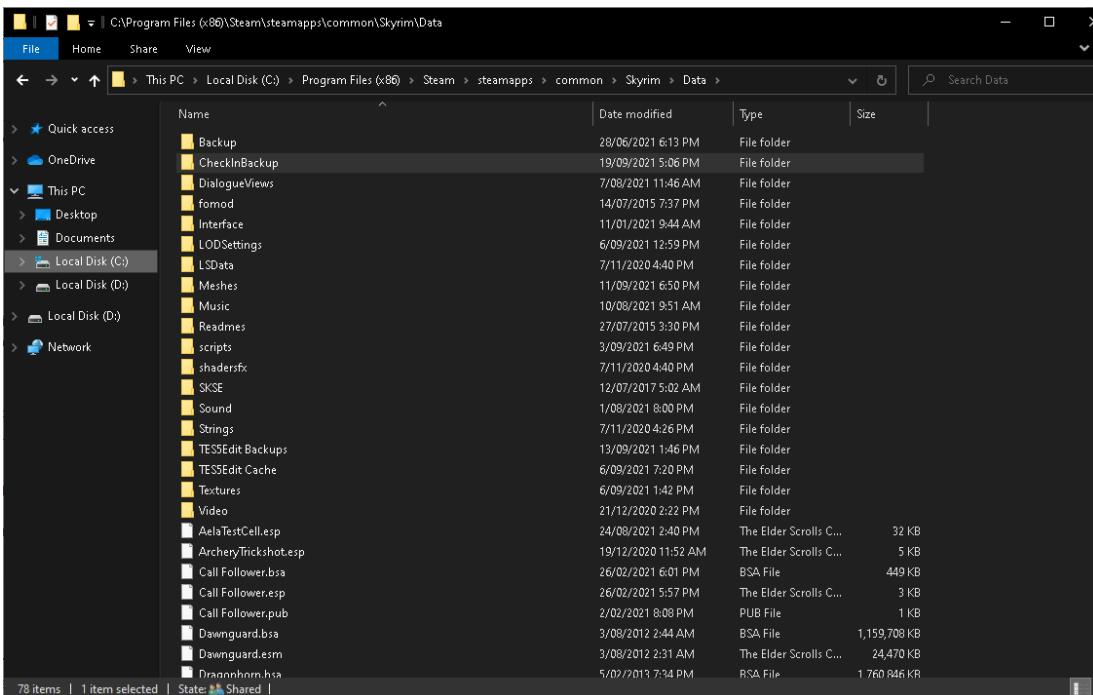


Figure 1457 - CheckInBackup folder.

Important: Your .esp/.esm file should have the ‘esm’ flag. For steps on adding the ‘esm’ flag to your mod, see [ESM-ifying your mod in xEdit](#).

Copy your mod and any master files it relies on to the Skyrim\Merging\Data folder. For Skyrim Special Edition that’s Skyrim Special Edition\Merging\Data folder.

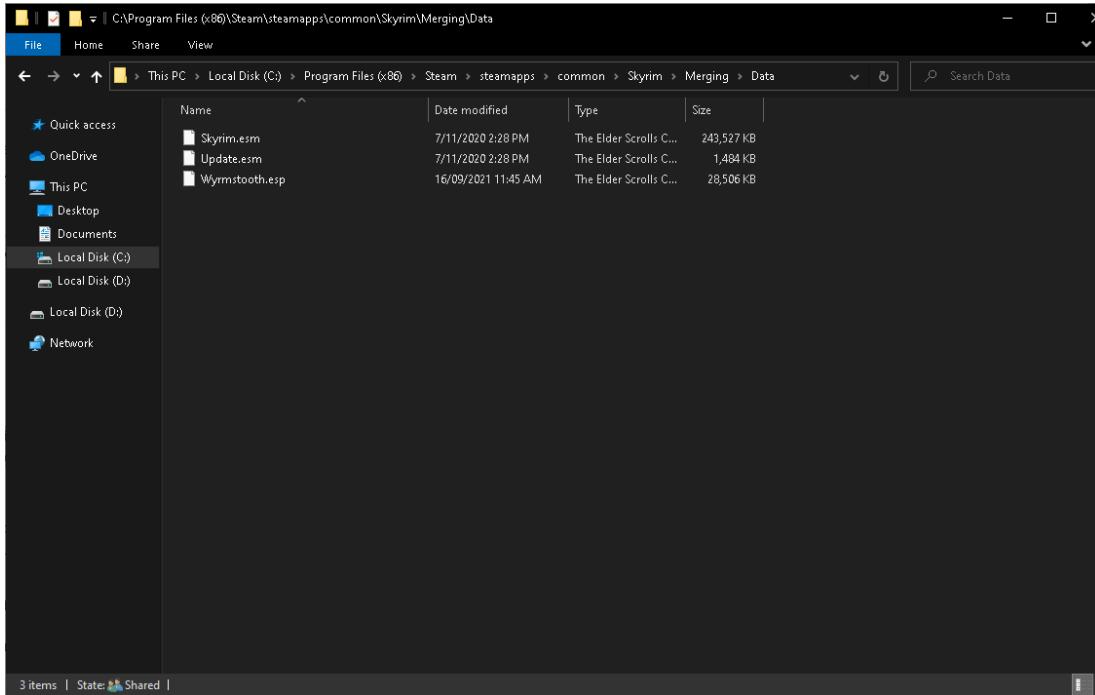


Figure 1458 - Skyrim.esm, Update.esm and our master file copied to the Skyrim\Merging\Data folder.

Open your SkyrimEditor.ini file.

Under the [General] tab, add the following lines:

```
bUseVersionControl=1
SNetwork Path=\<YourPCName>\Merging\
SNewVersionBackupPath=\<YourPCName>\Merging\VersionBackup\
SNetworkMasterPath=\<YourPCName>\Merging\Data\
SLocalSavePath=Saves\
SLocalMasterPath=Data\
SLocalBackupPath=Data\CheckInBackup
```

Replace <YourPCName> with the name of your PC. To find your PC's name on Windows 10, run msinfo32 and check the 'Device Name' property.

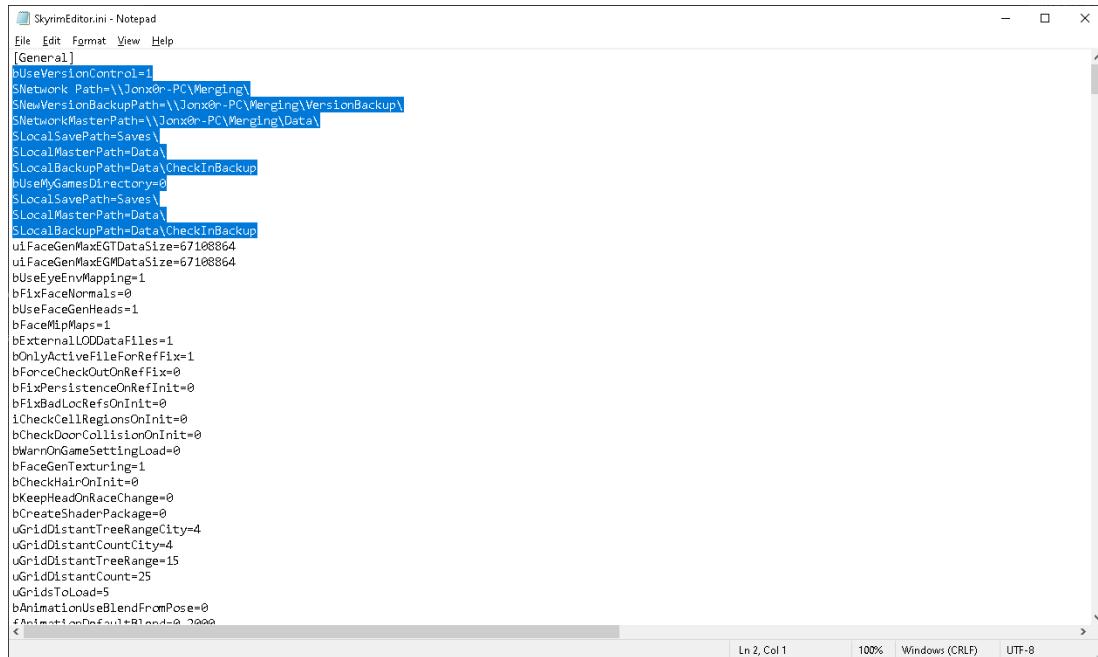


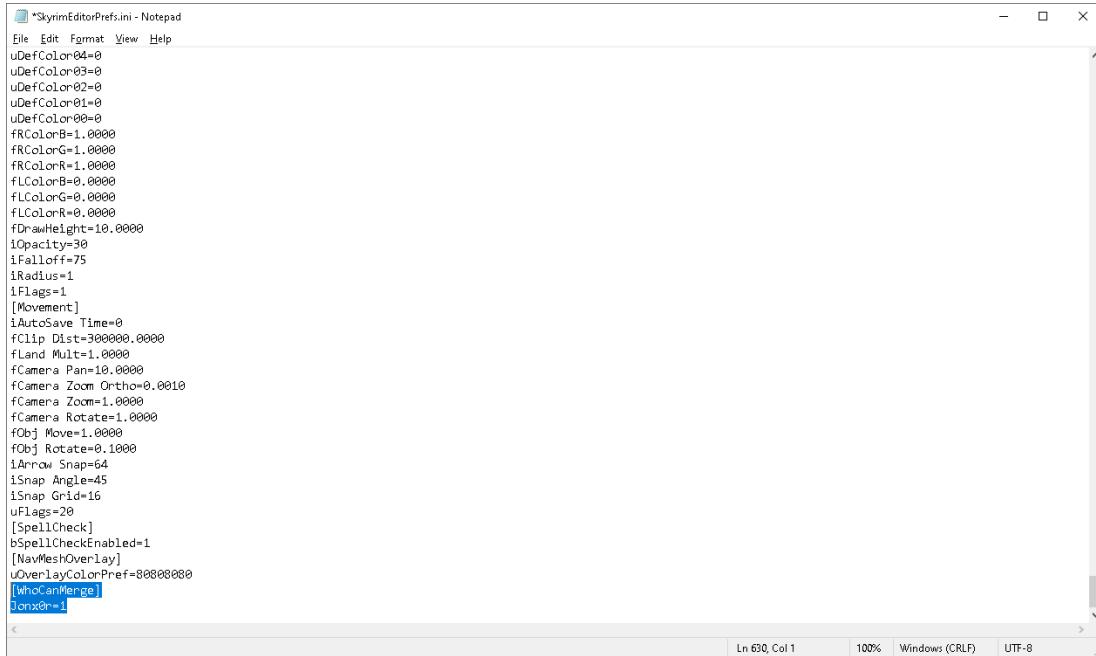
Figure 1459 - SkyrimEditor.ini with Version Control set up.

Open your `SkyrimEditorPrefs.ini` file and add the following lines:

```
[WhoCanMerge]
<YourUsername>=1
```

Replace `<YourUsername>` with the name of your Windows user account.

To get your user account name, run `CMD.exe` and look at the command prompt.



The screenshot shows a Windows Notepad window titled "SkyrimEditorPrefs.ini - Notepad". The file contains configuration settings for the Skyrim Editor. A new section, "[WhoCanMerge]", has been added at the bottom, containing the line "`<YourUsername>=1`". The rest of the file includes various parameters like colors, camera controls, and mesh overlays.

```
*SkyrimEditorPrefs.ini - Notepad
File Edit Format View Help
uDefColor04=0
uDefColor03=0
uDefColor02=0
uDefColor01=0
uDefColor00=0
fRColorB=1.0000
fRColorG=1.0000
fRColorR=1.0000
fLColorB=0.0000
fLColorG=0.0000
fLColorR=0.0000
fDrawHeight=10.0000
iOpacity=30
iFallOff=75
iRadius=1
iFlags=1
[Movement]
iAutoSave Time=0
fClip Dist=300000.0000
fLand Mult=1.0000
fCamera Pan=10.0000
fCamera Zoom Ortho=0.0010
fCamera Zoom=1.0000
fCamera Rotate=1.0000
fObj Move=1.0000
fObj Rotate=0.1000
iArrow Snap=64
iSnap Angle=45
iSnap Grid=16
uFlags=20
[SpellCheck]
bSpellCheckEnabled=1
[NavMeshOverlay]
OverlayColorPref=80808080
[WhoCanMerge]
<YourUsername>=1
```

Figure 1460 - User account line added to `SkyrimEditorPrefs.ini`

Back in your Skyrim or Skyrim Special Edition install directory, right-click on the Merging folder and select Properties.

Go to the Sharing tab.

If no Sharing tab is visible, run ‘services.msc’ and make sure the ‘Security Accounts Manager’ and ‘Server’ services are Running and have their start-up set to Automatic.

If you need to enable any of these services, you will need to reboot your PC before continuing.

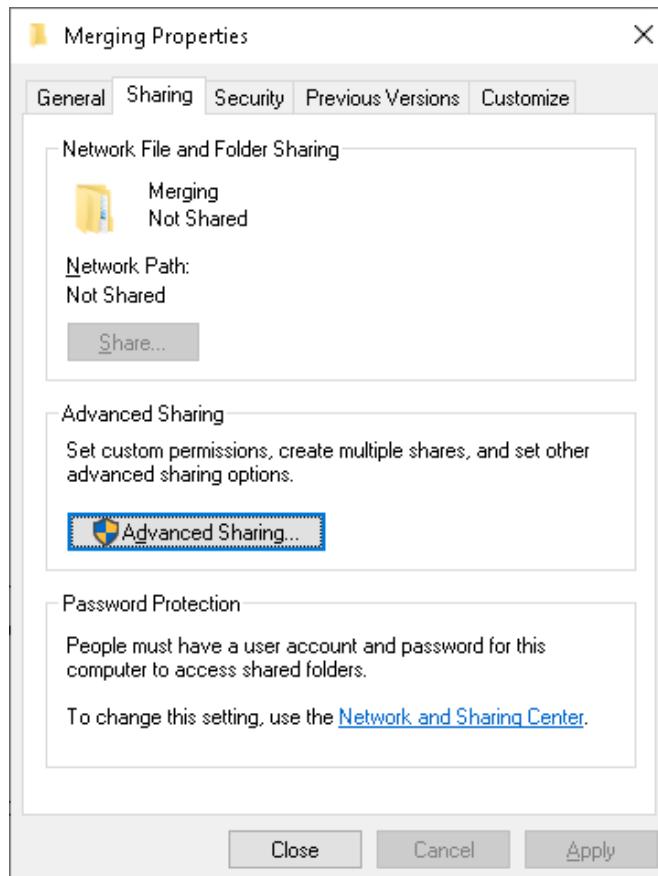


Figure 1461 - Sharing tab.

Click on the Advanced Sharing button.

Tick ‘Share this folder’.

Make sure the ‘Share name’ is set to ‘Merging’.

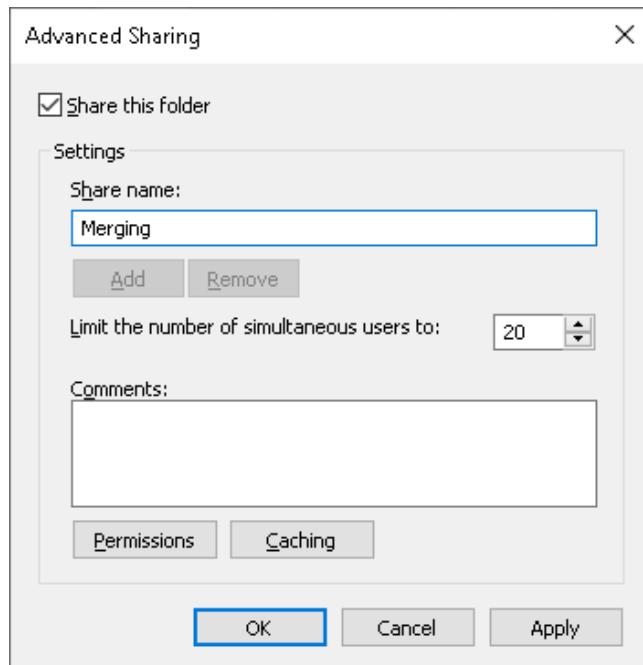


Figure 1462 - Sharing the Merging folder.

Click Permissions.

Click Add.

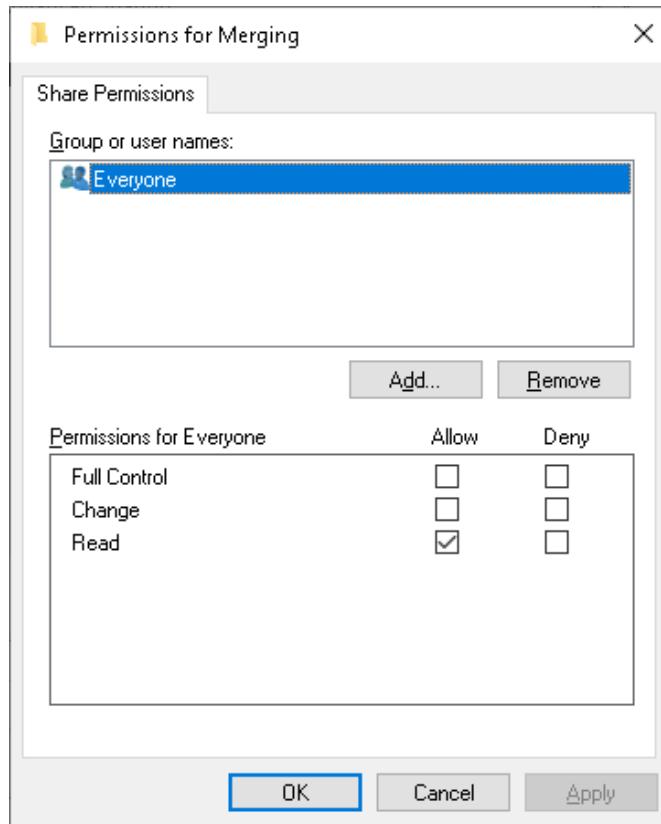


Figure 1463 - Share permissions.

Enter in your user name and click Check Names. The computer name should be automatically added if the user account you typed was found.

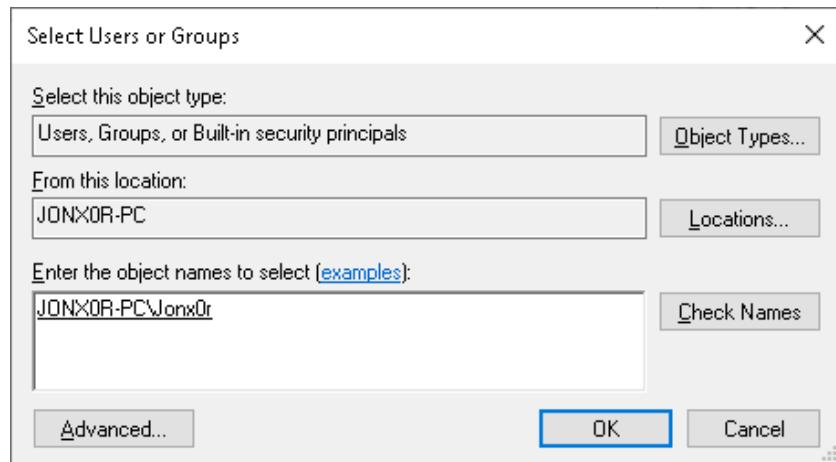


Figure 1464 - Adding your user account.

Click OK.

With your user account selected, tick Change in the Permissions list below.

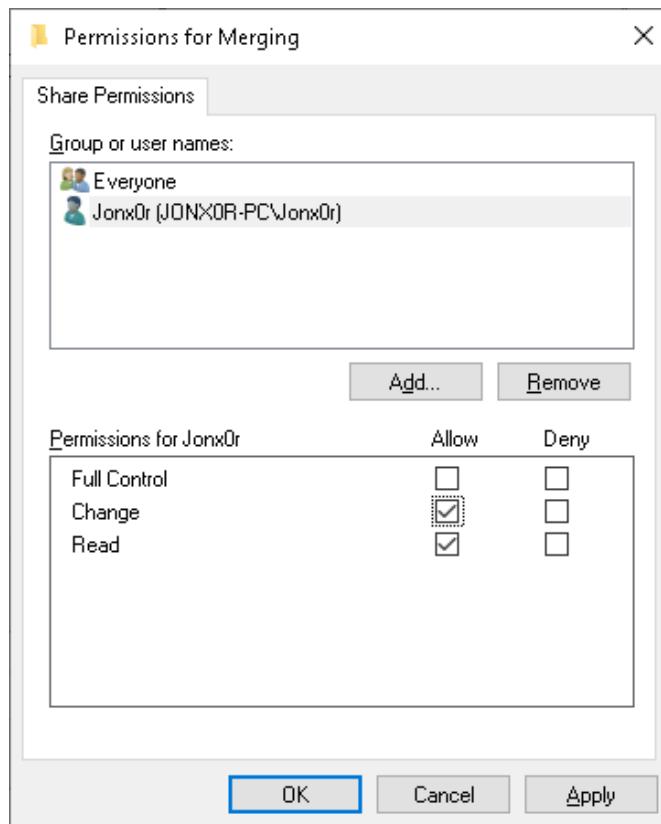


Figure 1465 - Giving yourself Change permissions.

Click OK to close out of Share Permissions.

Click OK to close out of Advanced Sharing.

Click OK to close out of Merging Properties.

Now we need to share the CheckInBackup folder.

Go to Data, right-click on CheckInBackup and select Properties.

Go to the Sharing tab.

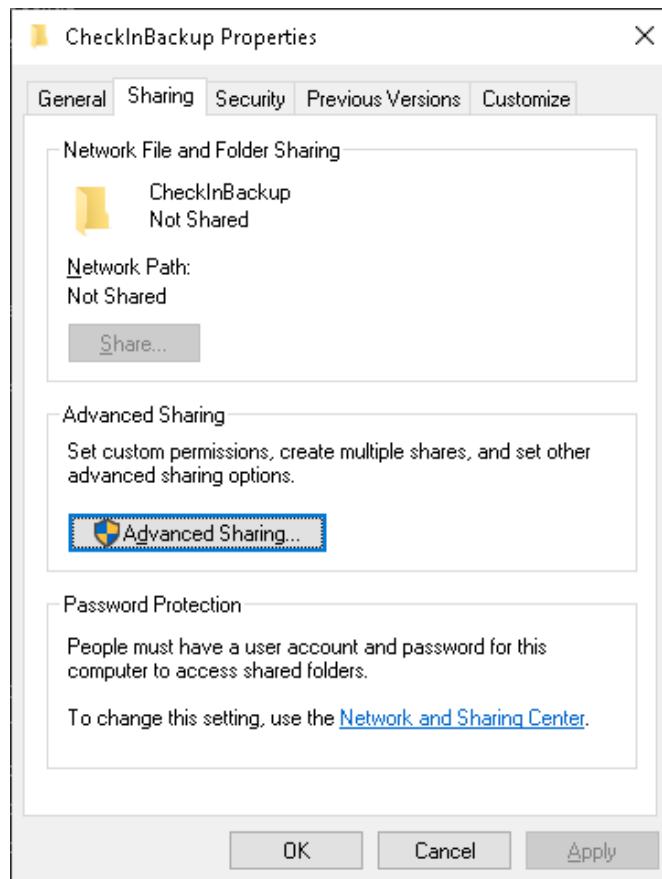


Figure 1466 - Sharing tab for the CheckInBackup folder.

Click on Advanced Sharing.

Tick ‘Share this folder’.

Make sure the ‘Share name’ is set to ‘CheckInBackup’.

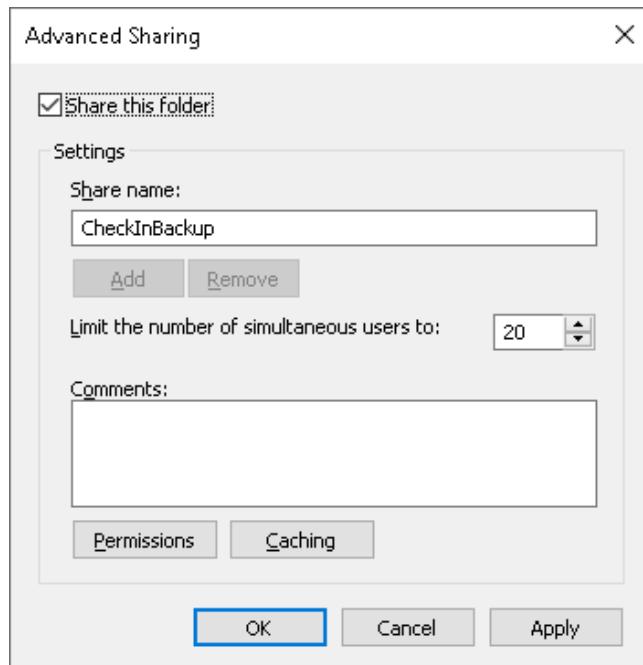


Figure 1467 - Creating the CheckInBackup share.

Click Permissions.

Click Add.

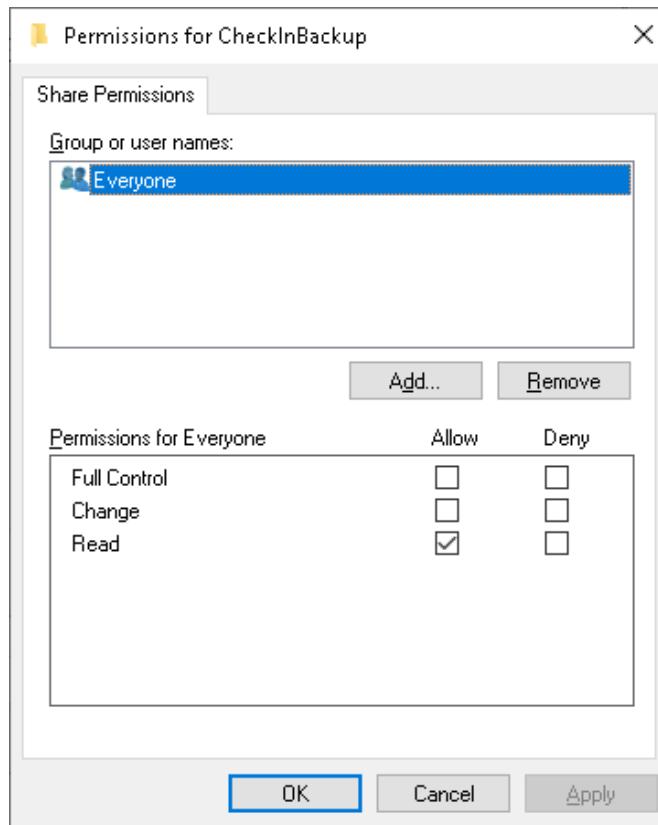


Figure 1468 - Adding share permissions.

Enter in your user name and click Check Names. The computer name should be automatically added if the user account you typed was found.

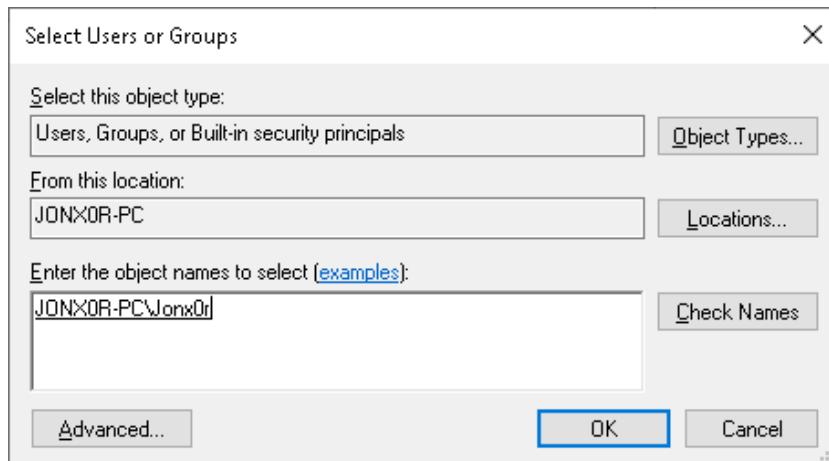


Figure 1469 - Adding your user account.

Click OK.

With your user account selected, tick 'Change' in the Permissions list.

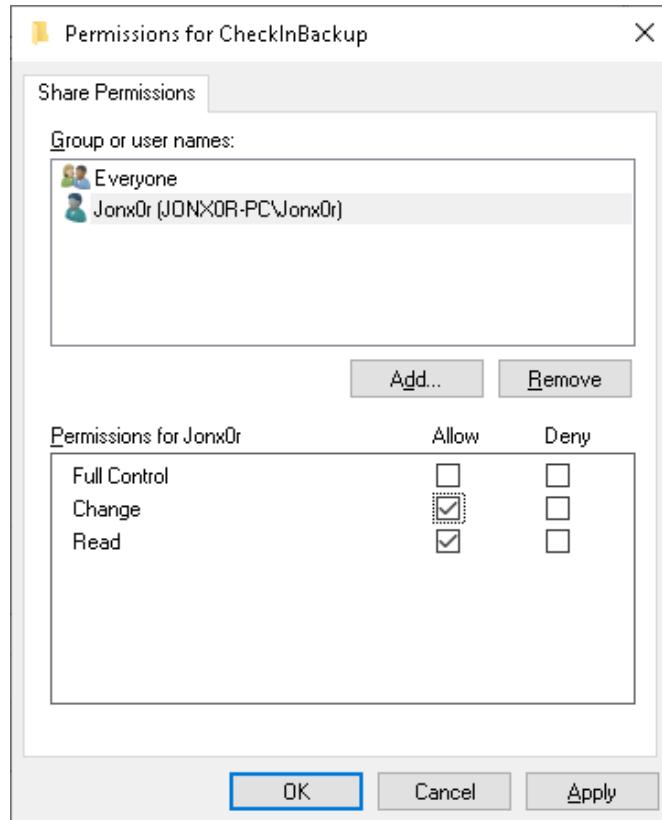


Figure 1470 - Giving yourself Change permission on the share.

Click OK to close out of Share Permissions.

Click OK to close out of Advanced Sharing.

Click OK to close out of CheckInBackup Properties.

If you can't connect to your shares by running \\<YourComputerName>\Merging and \\<YourComputerName>\CheckInBackup, read on.

Click on "Turn Windows features on or off".

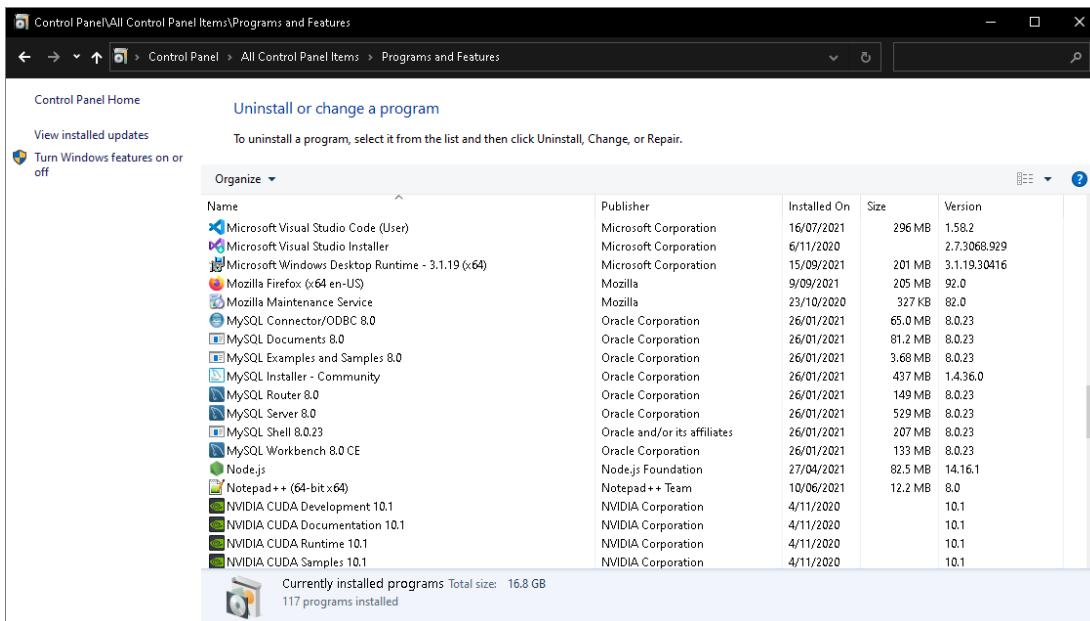


Figure 1471 - Control panel.

Browse down to 'SMB 1.0/CIFS File Sharing Support' and make sure 'SMB 1.0/CIFS Client' is ticked. If it isn't, tick it, click OK and reboot your PC.

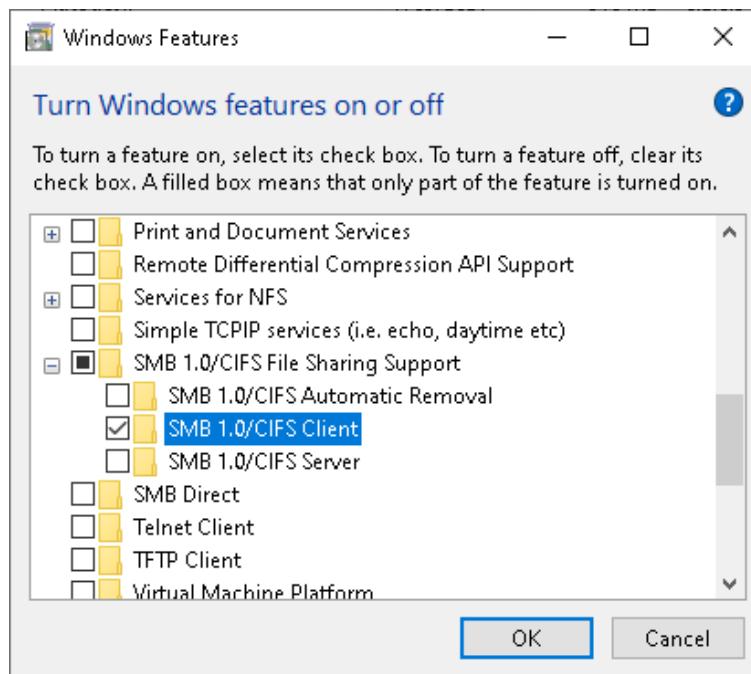


Figure 1472 - SMB 1.0/CIFS Client.

Go to Control Panel > Network and Sharing Center.

Click on ‘Change advanced sharing settings’.

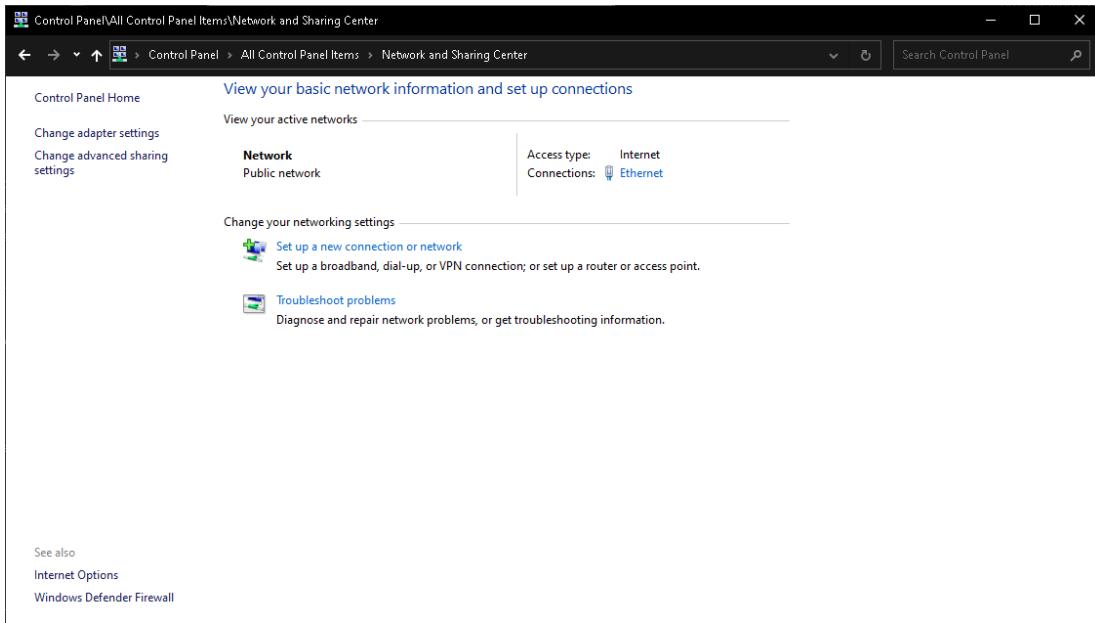


Figure 1473 - Network and Sharing Center.

Under Private, tick ‘Turn on file and printer sharing’.

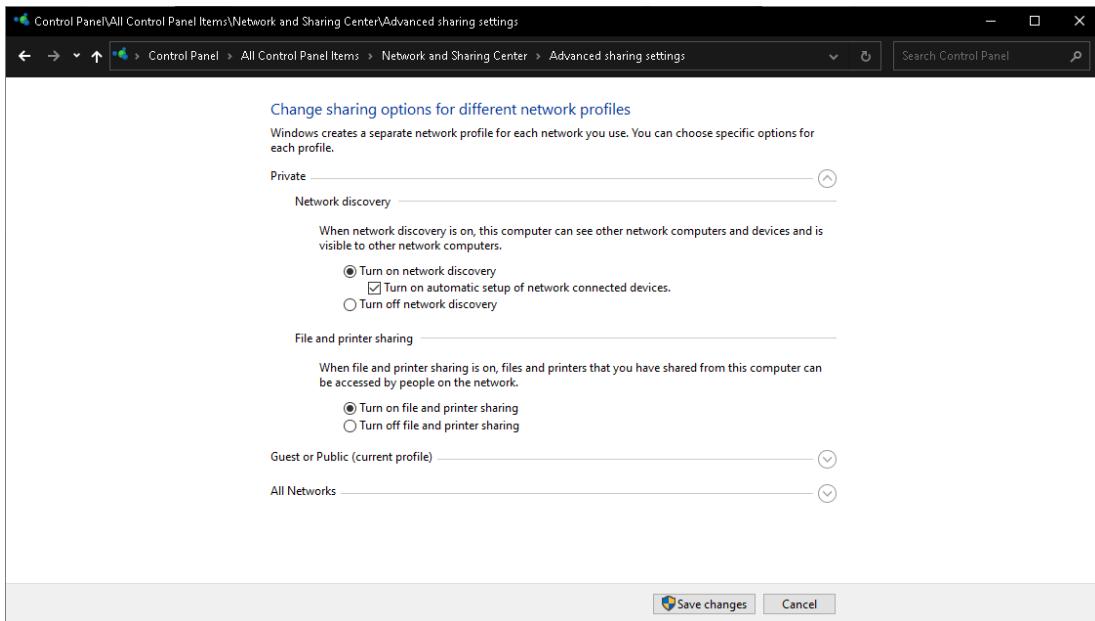


Figure 1474 - Enabling file and printer sharing.

Click ‘Save changes’.

Run services.msc and make sure the following services are running: Function Discovery Provider Host, Function Discovery Resource Publication, SSDP Discovery, UPnP Device Host.

Also make sure 'File and Printer Sharing for Microsoft Networks' is enabled on your network adapter.

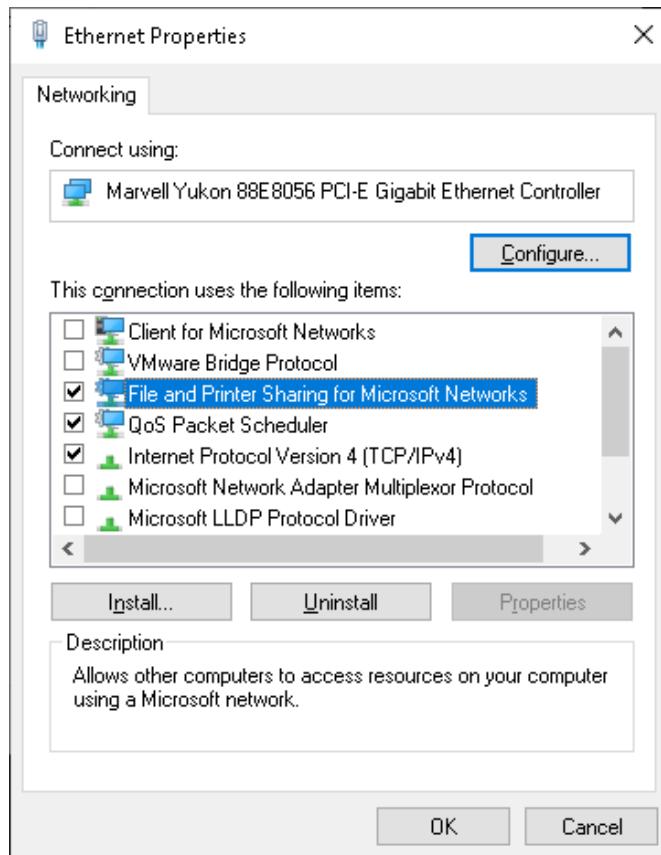


Figure 1475 - Enabling File and Printer Sharing for Microsoft Networks.

You should now be able to connect to your share by running
\\<YourComputerName>\Merging and \\<YourComputerName>\CheckInBackup.

e.g.: \\jonx0r-pc\Merging and \\jonx0r-pc\CheckInBackup.

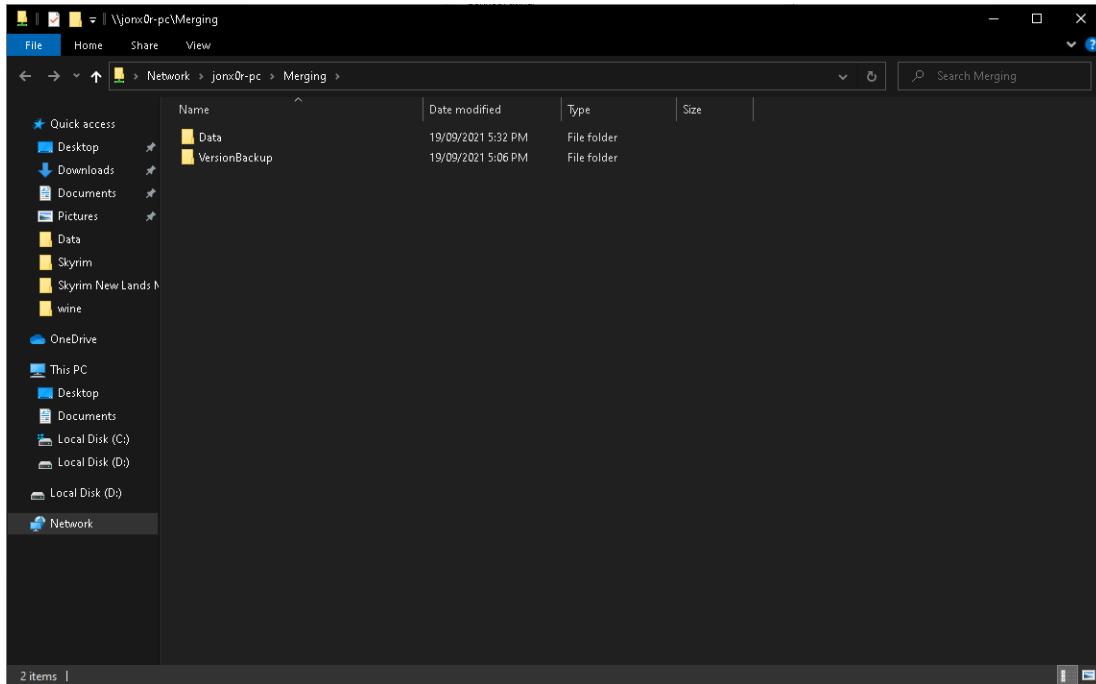


Figure 1476 - Connecting to a network share.

By default, you won't be able to merge changes made to forms in `Skyrim.esm`. To be able to do this, we'll need to make a small edit to `Skyrim.esm` with a hex editor.

We'll need a copy of [frehed](#) which you can download from Sourceforge.

Important: Before doing anything, make a backup of your `Skyrim.esm` file from the `Skyrim\Data` or `Skyrim Special Edition\Data` folder.

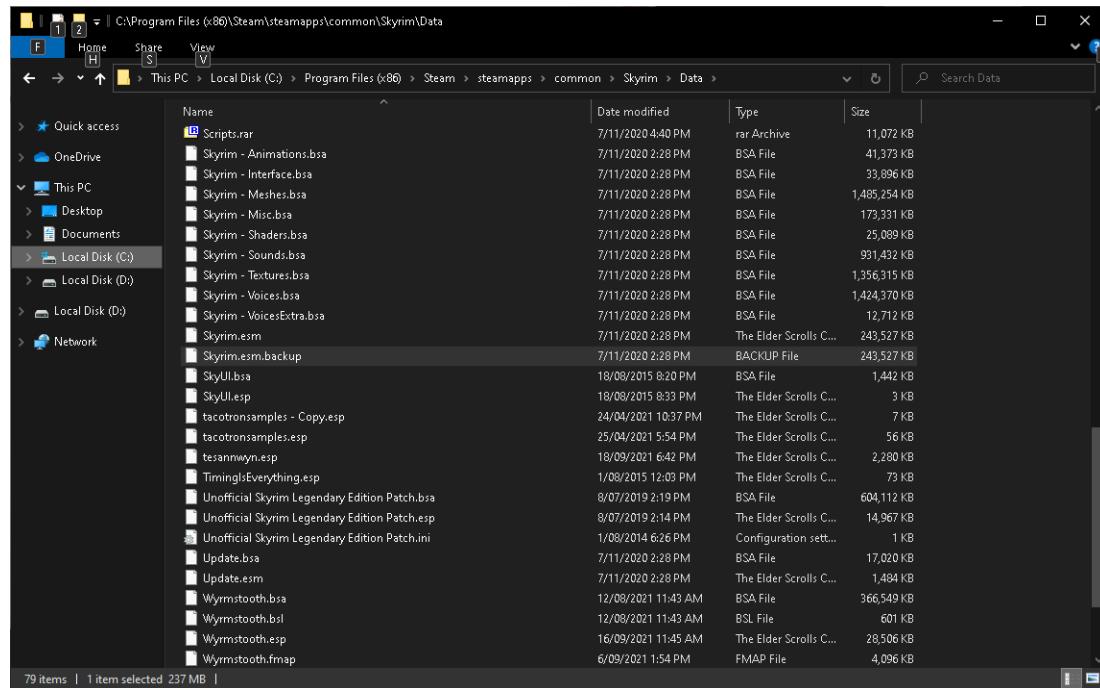


Figure 1477 - Backup of `Skyrim.esm`.

Open frehed.



Figure 1478 - Time for some fun with frehed.

Go to File > Open.

Select the Skyrim.esm file in your Skyrim\Data or Skyrim Special Edition\Data folder and click Open.

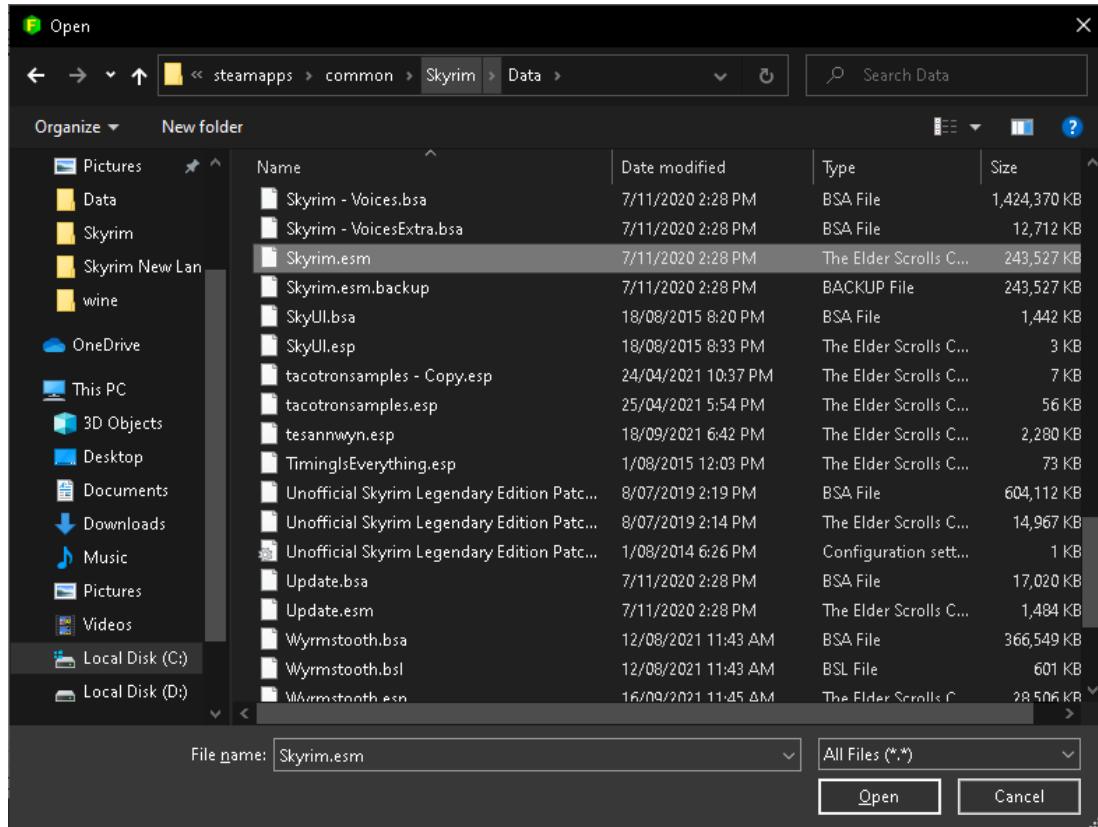


Figure 1479 - Opening the Skyrim.esm file in frebed.

By default, the value of the ninth byte in `Skyrim.esm` is 81.

To find this, go to the first row 00000000. Starting from the top-left, go right and look for '81'. It should be the ninth value pair from the top-left.

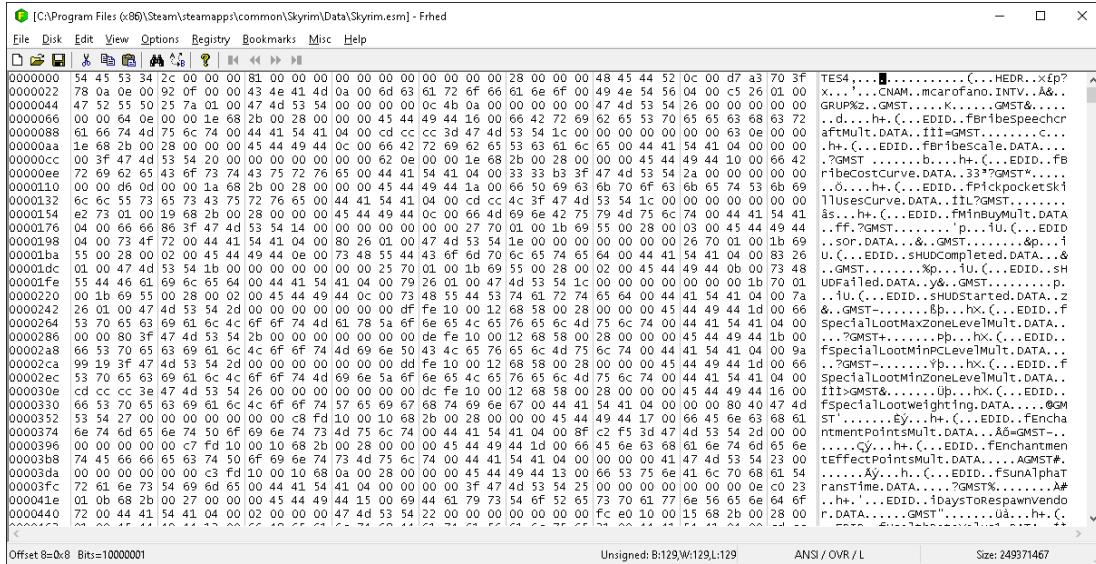


Figure 1480 - Default value of the ninth byte.

Change 81 to 01.

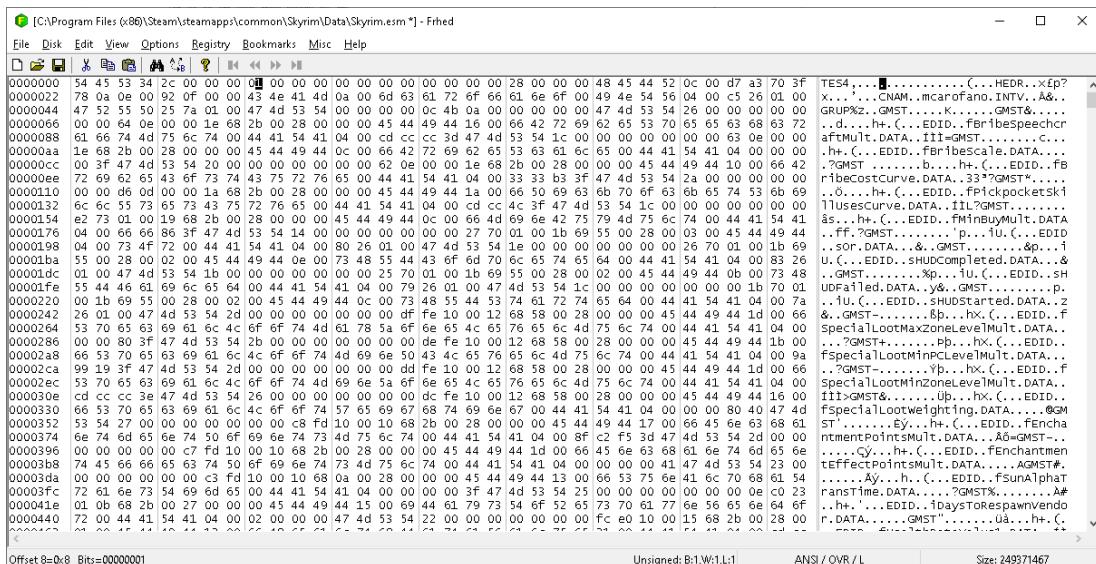


Figure 1481 - Changing the value of the ninth byte.

Go to File > Save.

Close frehed.

Important: If you want to play the game, rename the current `Skyrim.esm` file to `Skyrim.esm.hexedited`, and rename the `Skyrim.esm.backup` file back to `Skyrim.esm`.

Copy the Skyrim.esm file from your Skyrim\Data or Skyrim Special Edition\Data folder to your Skyrim\Merging\Data or Skyrim Special Edition\Merging\Data folder.

Overwrite the Skyrim.esm file we copied there previously.

Launch the Creation Kit.

Click OK to the Perforce Interface warning.

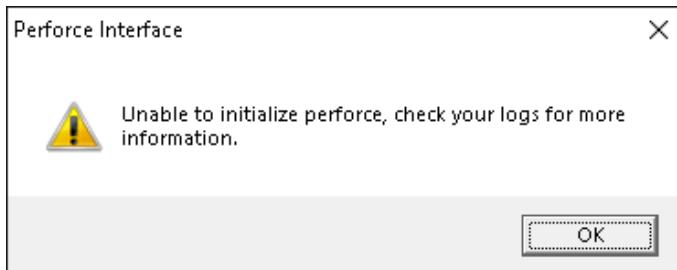


Figure 1482 - Perforce Interface warning.

Things will look a bit different.

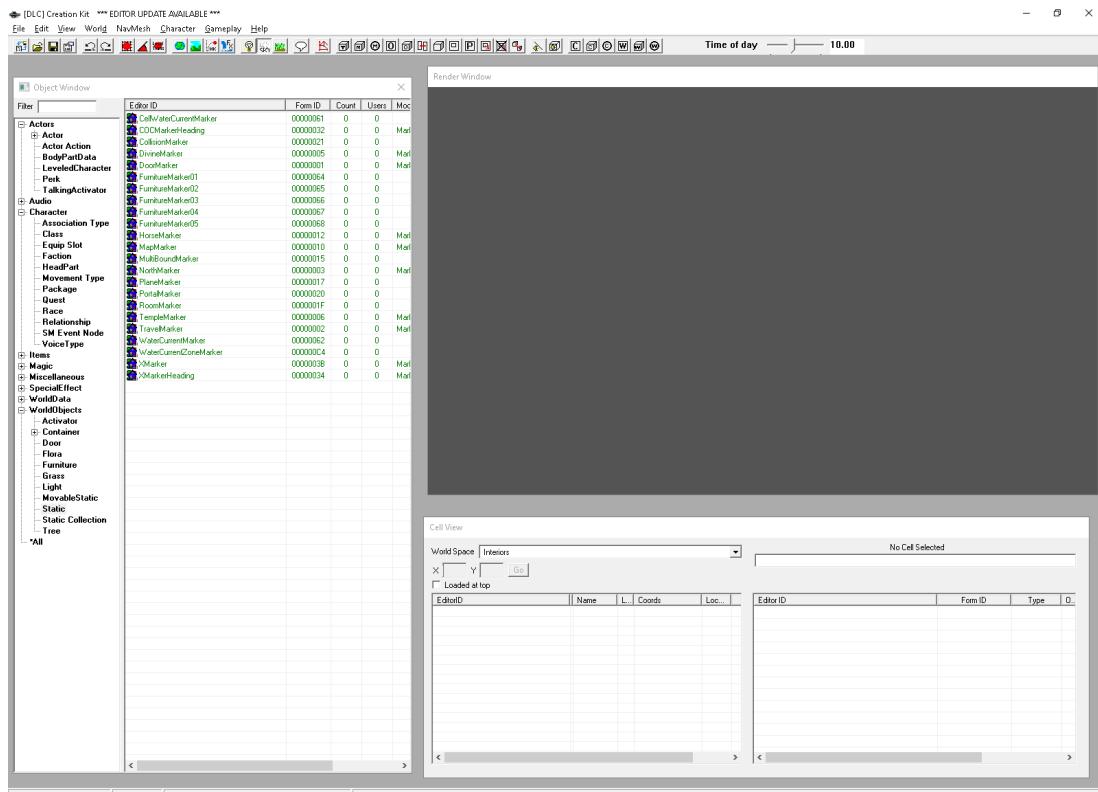


Figure 1483 - Creation Kit with Version Control enabled.

Go to File > Data.

Tick your master file in the Plugin/Master Files list.

Click OK to begin loading.

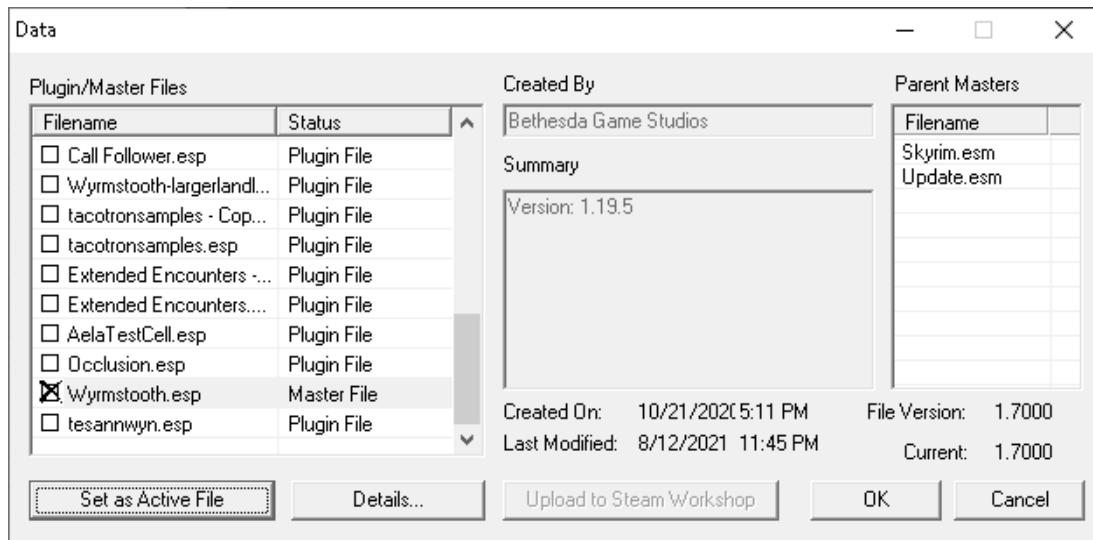


Figure 1484 - Loading your master file.

Click 'Yes To All' to all the warning pop-ups.



Figure 1485 - Ignore the warnings.

Go back to File > Data.

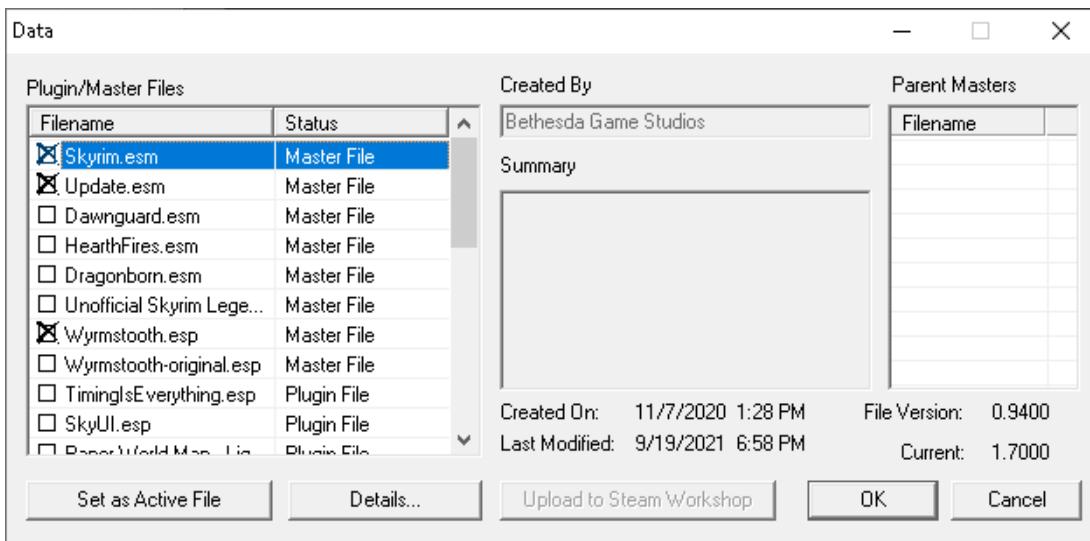


Figure 1486 - Plugin list.

Highlight Skyrim.esm and click on the Details button.

Click Yes to the 'Empty List?' pop-up.

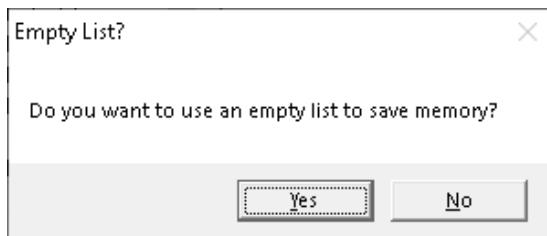


Figure 1487 - 'Empty List?' popup.

You should see a blank File Details list.

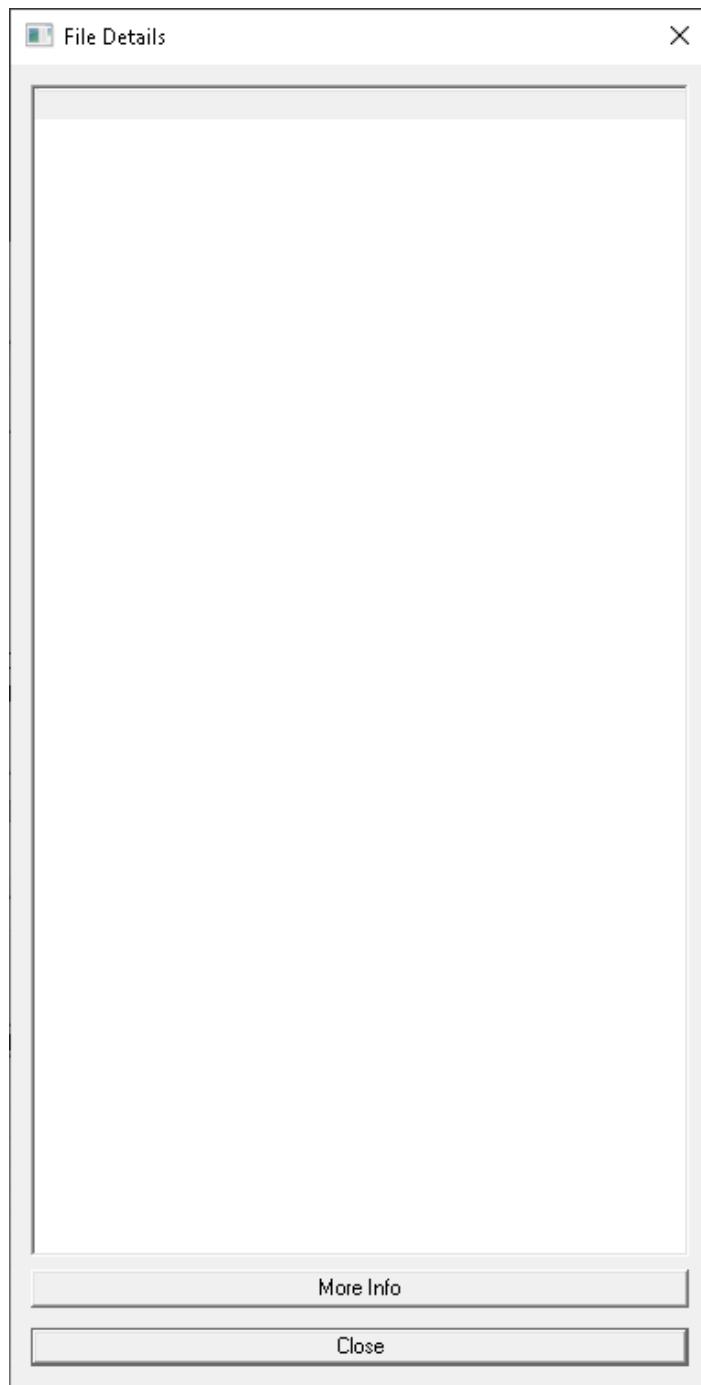


Figure 1488 - Blank File Details.

Press CTRL + Shift + B.

Click Yes to the ‘Confirm Bit Array File Update’ pop-up.

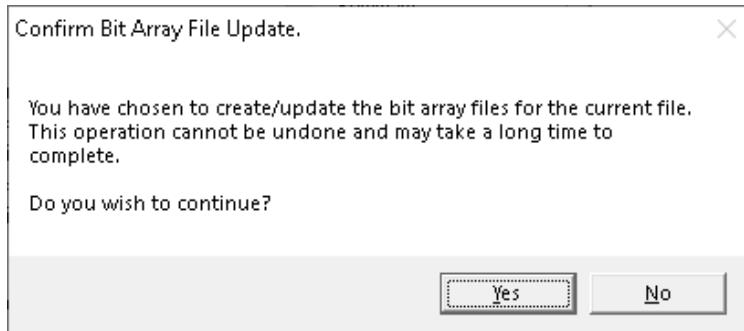


Figure 1489 - Confirm Bit Array File Update pop-up.

Now click Close to the File Details list.

You should now see the following files in your Skyrim\Merging\Data or Skyrim Special Edition\Merging\Data folder: Skyrim.fid, Skyrim.fud, Skyrim.fvd.

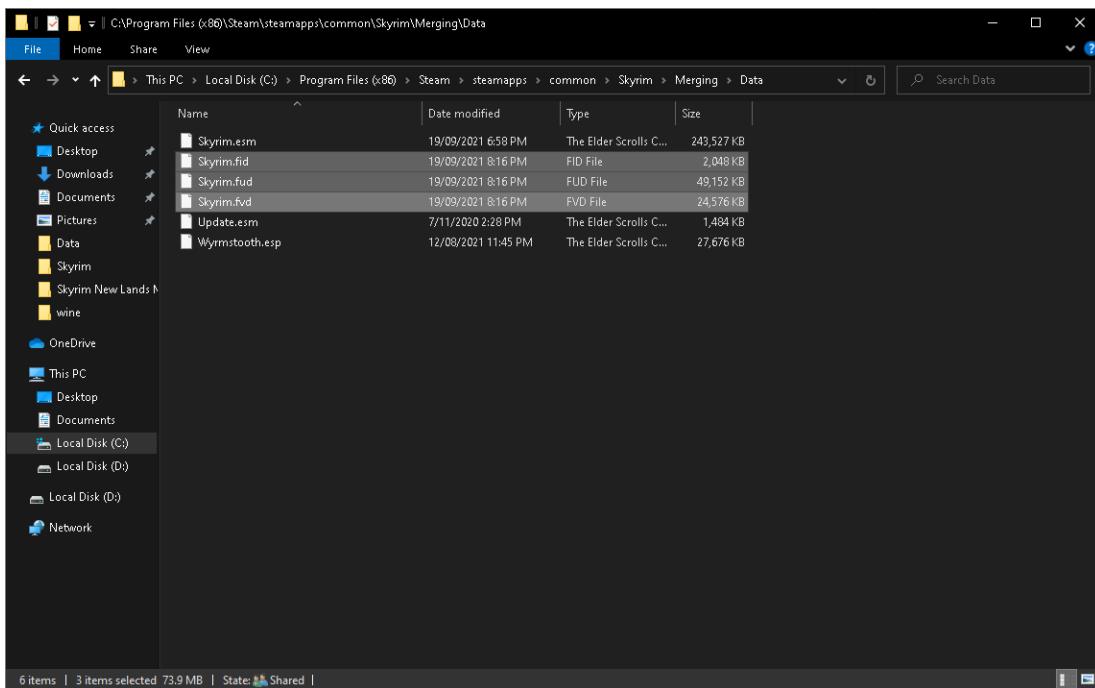


Figure 1490 - Skyrim.fid, Skyrim.fud, Skyrim.fvd files created.

Next, with Data still open, highlight your mod and repeat these steps to create a set of .fid, .fud, and .fvd files for your mod.

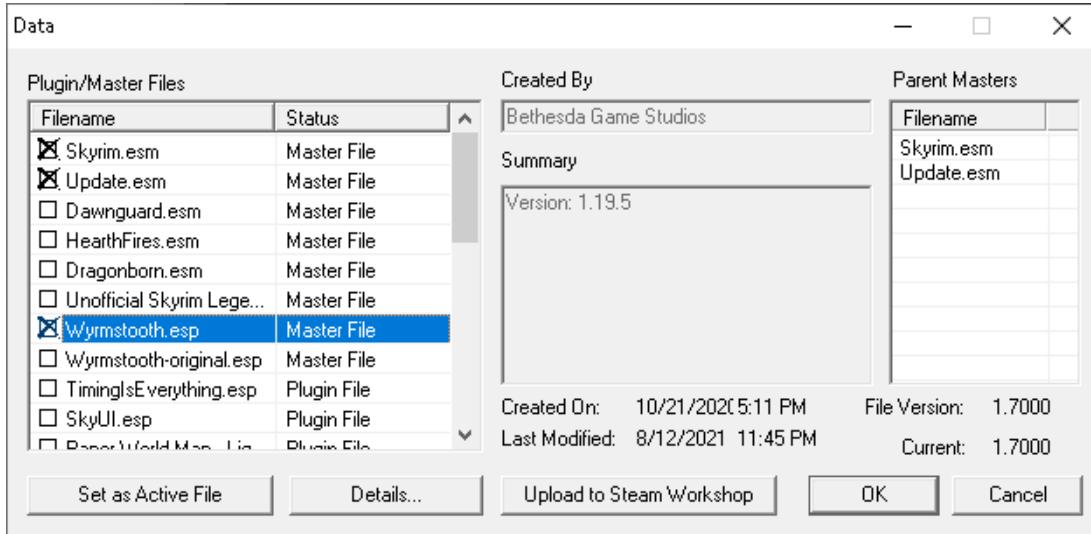


Figure 1491 - Generating the .fid, .fud and .fvd files for our mod.

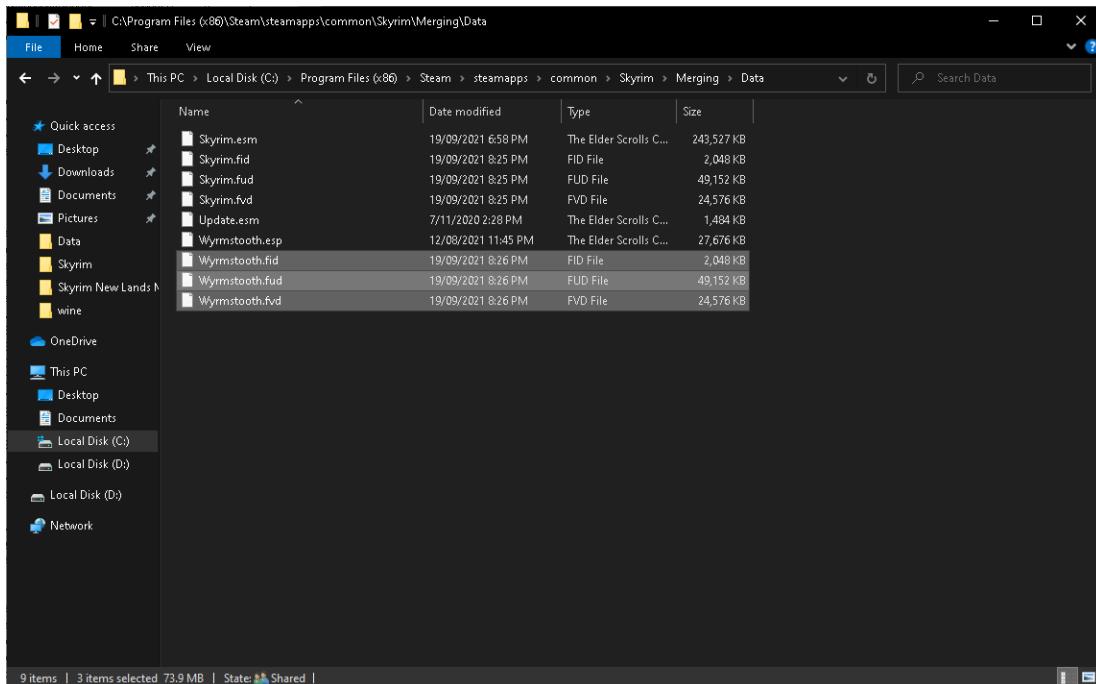


Figure 1492 - .fid, .fud, .fvd files have been created.

Important: Close and re-open the Creation Kit. If we don't do that at this stage, the Creation Kit may crash.

Also, if the file extension of your master file is .esp, you'll need to change it at this point to .esm in both your Skyrim\Data or Skyrim Special Edition\Data and Skyrim\Merging\Data or Skyrim Special Edition\Merging\Data folders.

Once again, tick your master file in the Plugin/Master Files list.

Click OK to begin loading.

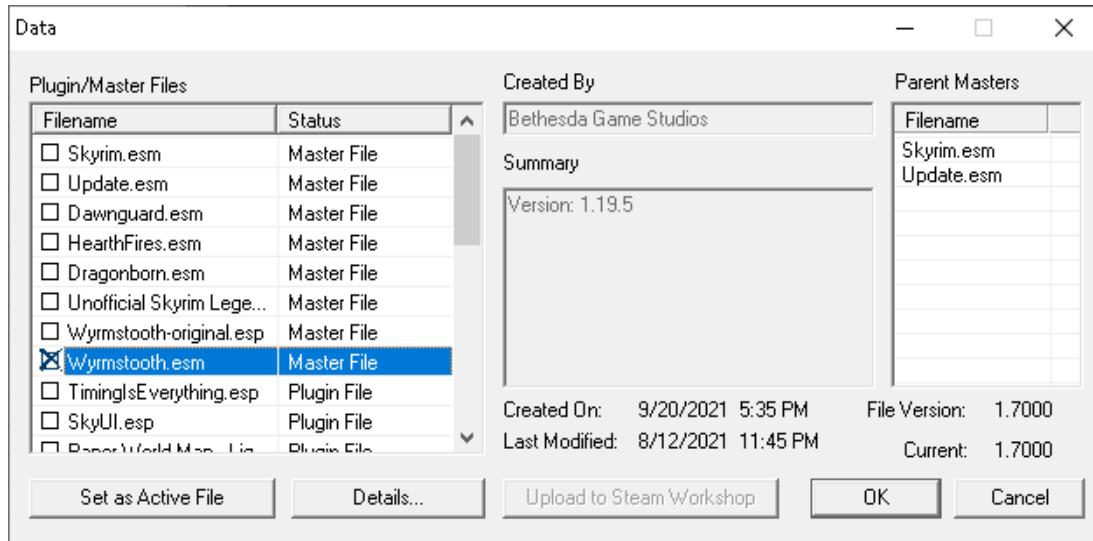


Figure 1493 - Loading your master file.

Right, now we should be ready to merge changes. But before we can do that, we need to make some changes to merge.

Just for the sake of this example, I'm going to add a barrel to an existing cell just to create a new record that we can merge into our master file.

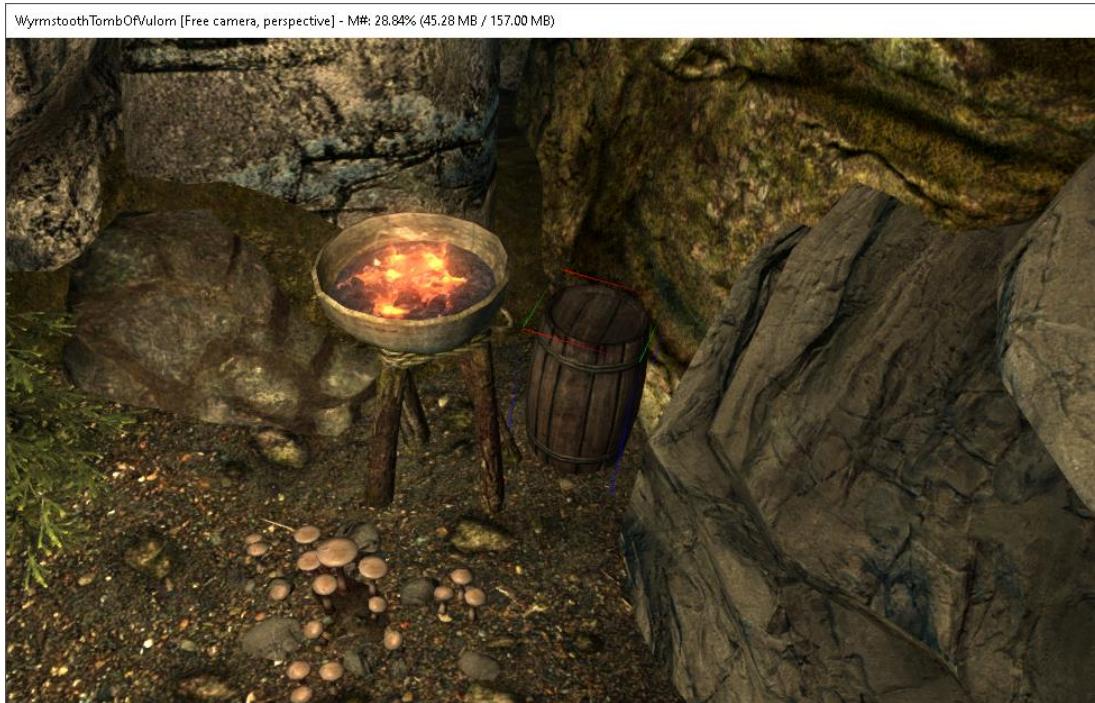


Figure 1494 - New barrel.

Go to File > Save.

Set the name of the .esp file. In my example, I just called it ‘testmerge’.

Next we’re going to merge this testmerge.esp file into our master.

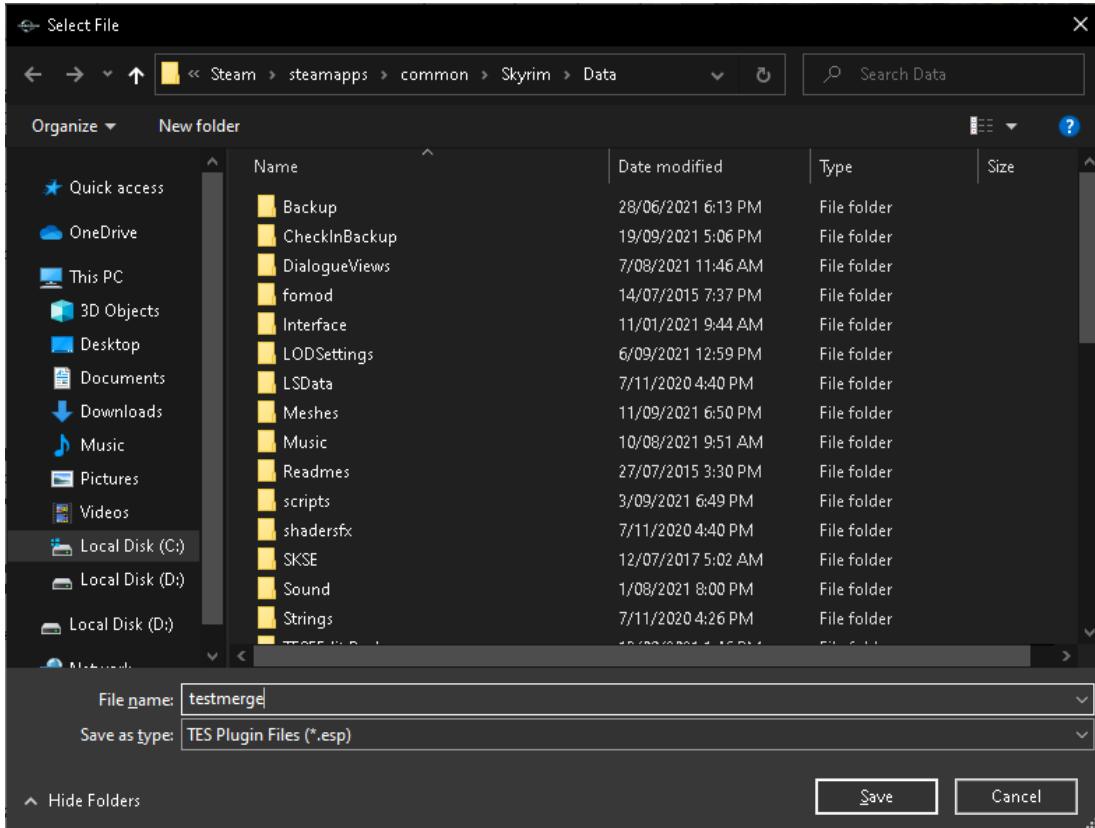


Figure 1495 - Saving a new plugin file to merge with our master file.

Click on the Version Control button at the top-left.

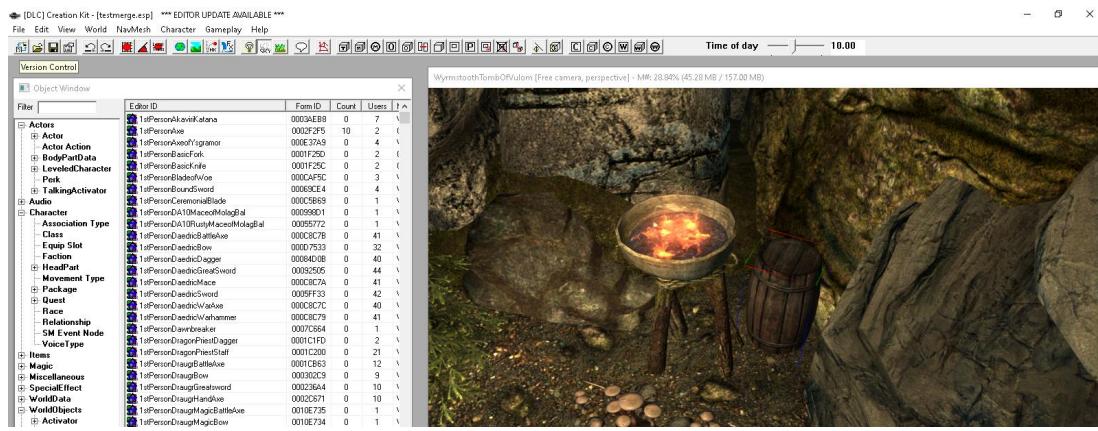


Figure 1496 - Version control button.

Click on the Select All button, then click on Check Out.

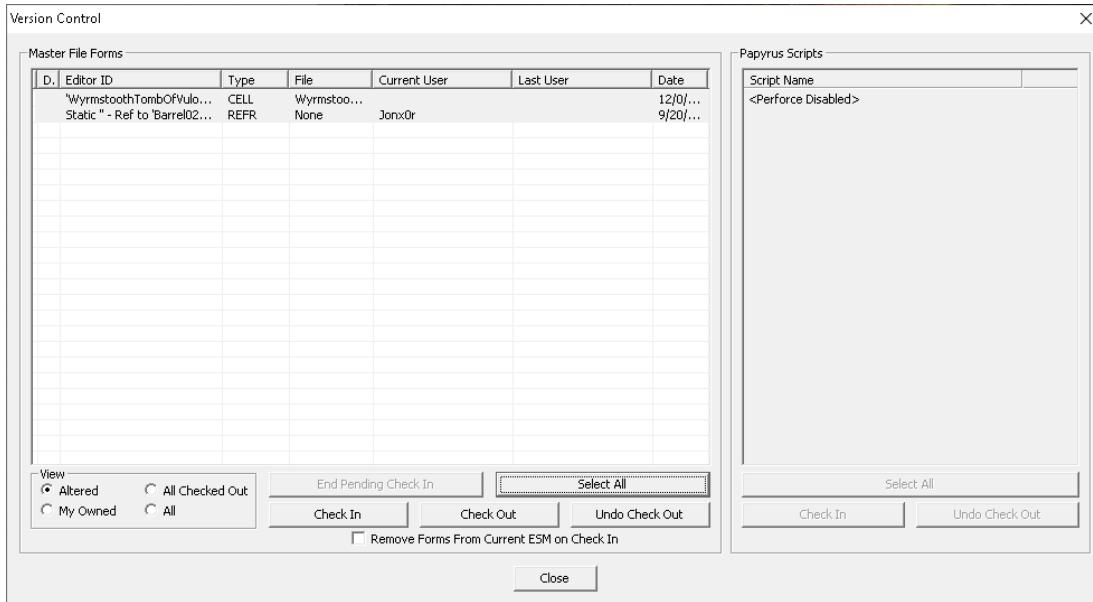


Figure 1497 - Checking out selected changes.

Click on the Select All button again, then click on Check In.

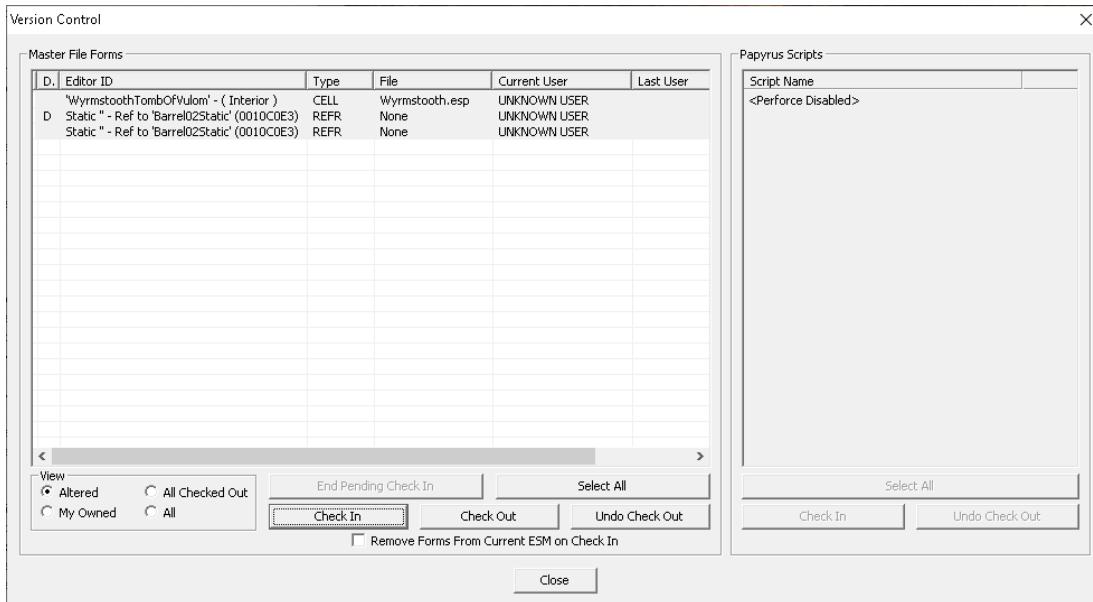


Figure 1498 - Checking in selected changes.

Enter a check in comment if you want to then click OK.



Figure 1499 - Check In comment, something to describe the changes.

Select the master file to merge these changes to.

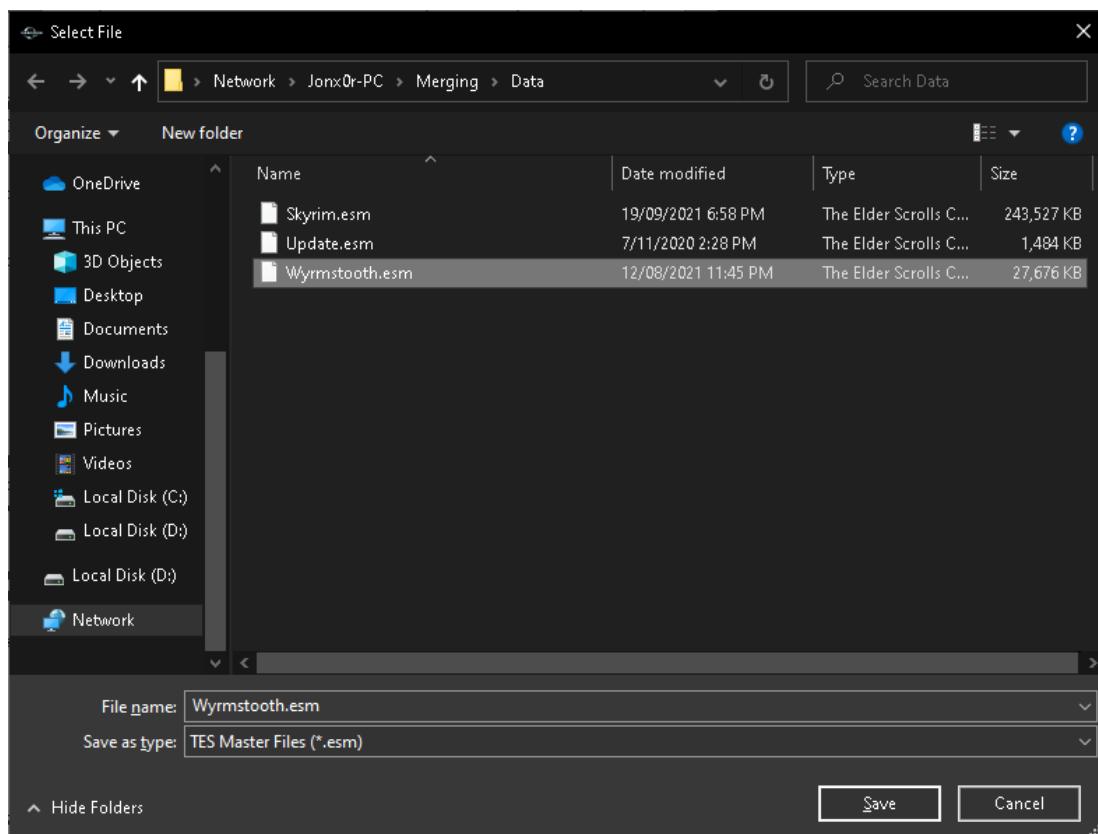


Figure 1500 - Selecting the master file to merge changes to.

Click No to the 'Remap FormIDs' pop-up.

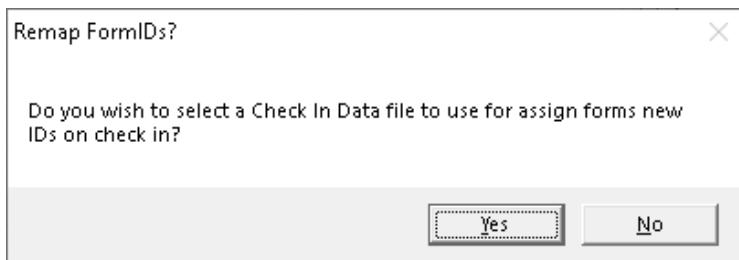


Figure 1501 - 'Remap FormIDs?' popup.

Click Close.

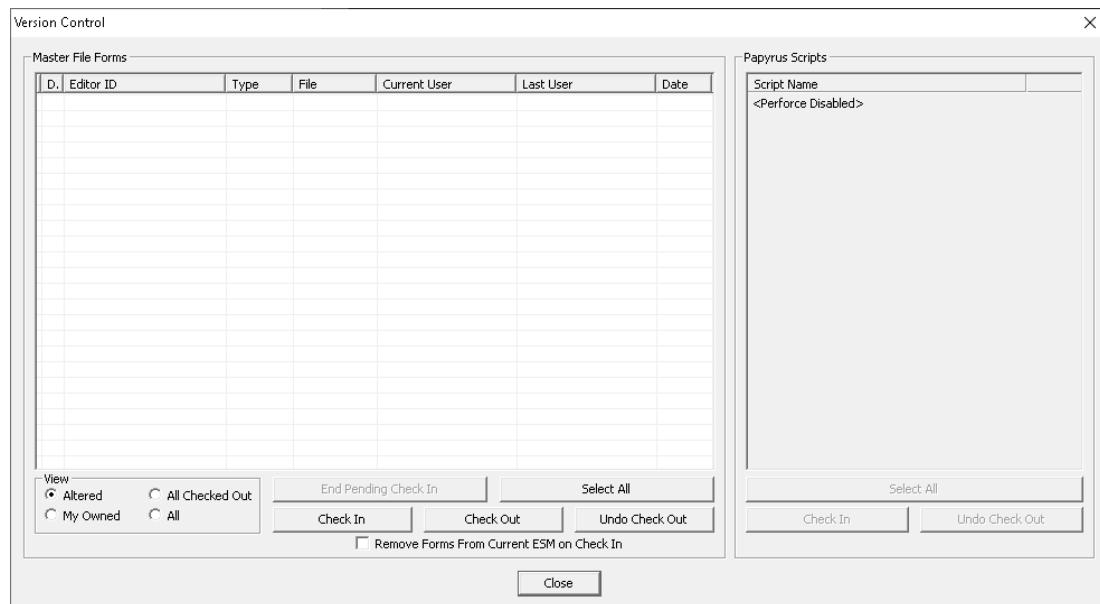


Figure 1502 - Version control after changes merged.

To test the merge, copy your master file from your `Skyrim\Merging\Data` or `Skyrim Special Edition\Merging\Data` folder to your `Skyrim\Data` or `Skyrim Special Edition\Data` folder.

Overwrite the existing file.

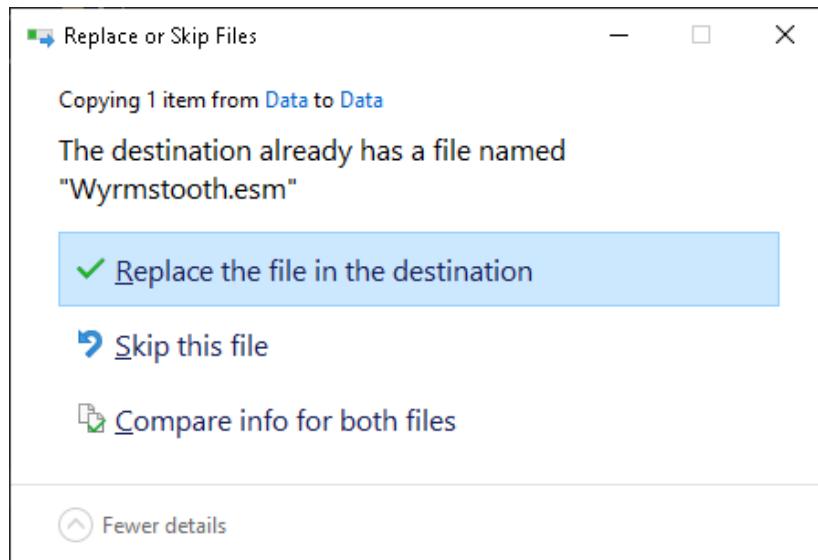


Figure 1503 - Overwrite existing master file.

Go to File > Data.

Tick your master file in the Plugin/Master Files list.

Ensure the merge plugin you created earlier isn't ticked.

Click OK.

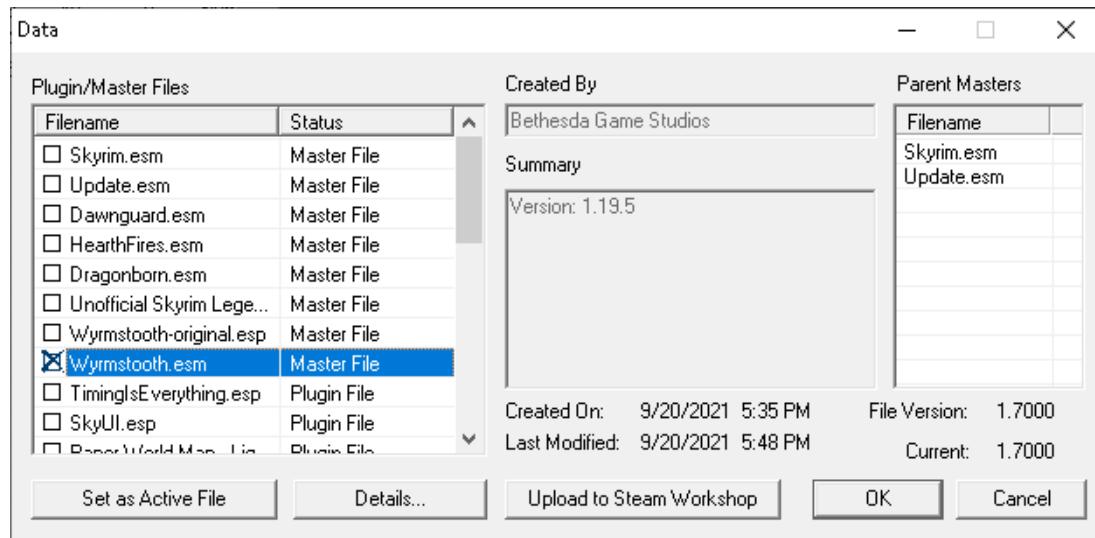


Figure 1504 - Plugin and master files.

And there's the barrel we added earlier, now part of the master file.



Figure 1505 - The barrel merged with the master file.

CLEANING YOUR MOD IN XEDIT

Cleaning will remove temporary records from your mod that are created as you edit cells, and will reduce the file size of your mod. First, go ahead and download a copy of [TES5Edit](#) or [SSEEdit](#) from Nexusmods and extract it from the .zip archive.

Launch TES5EditQuickAutoClean.exe/SSEEditQuickAutoClean.exe.

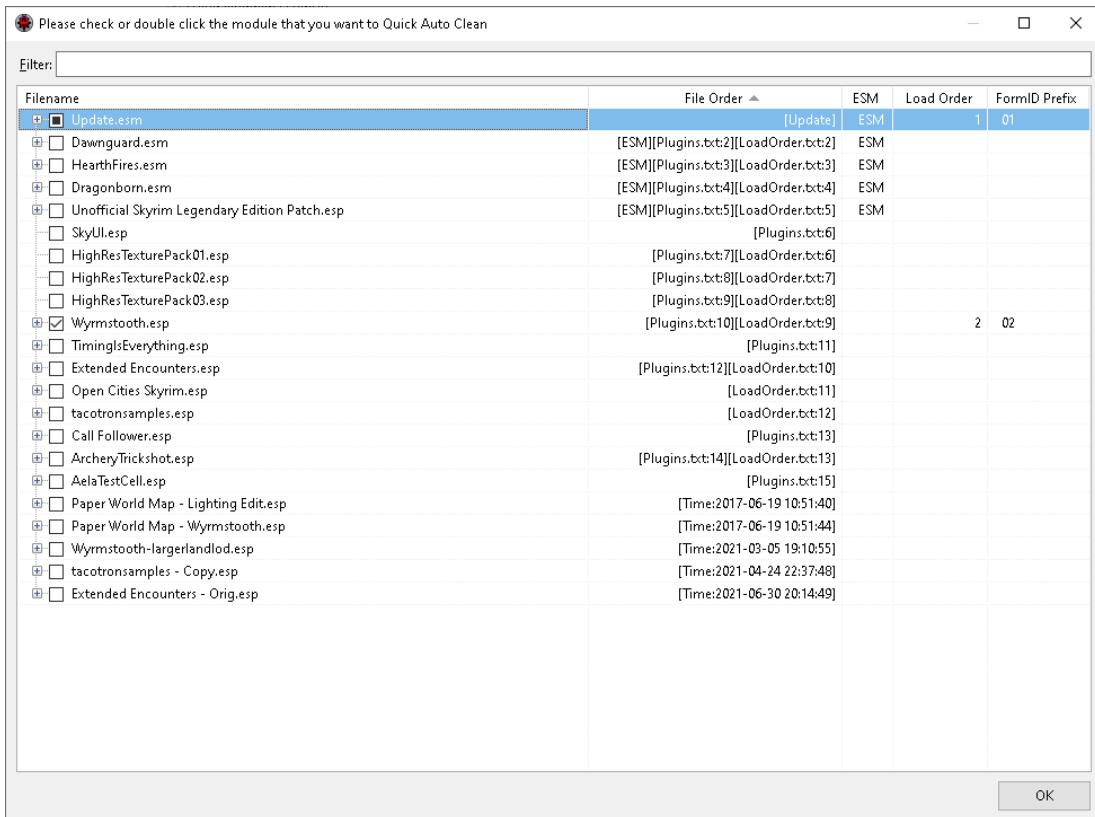


Figure 1506 - TES5Edit Quick Auto Clean module selection.

Select your mod then click OK.

Once it's done, click on the burger menu at the top-left and select Save or press CTRL + S just to make sure the changes have been saved before closing the application.

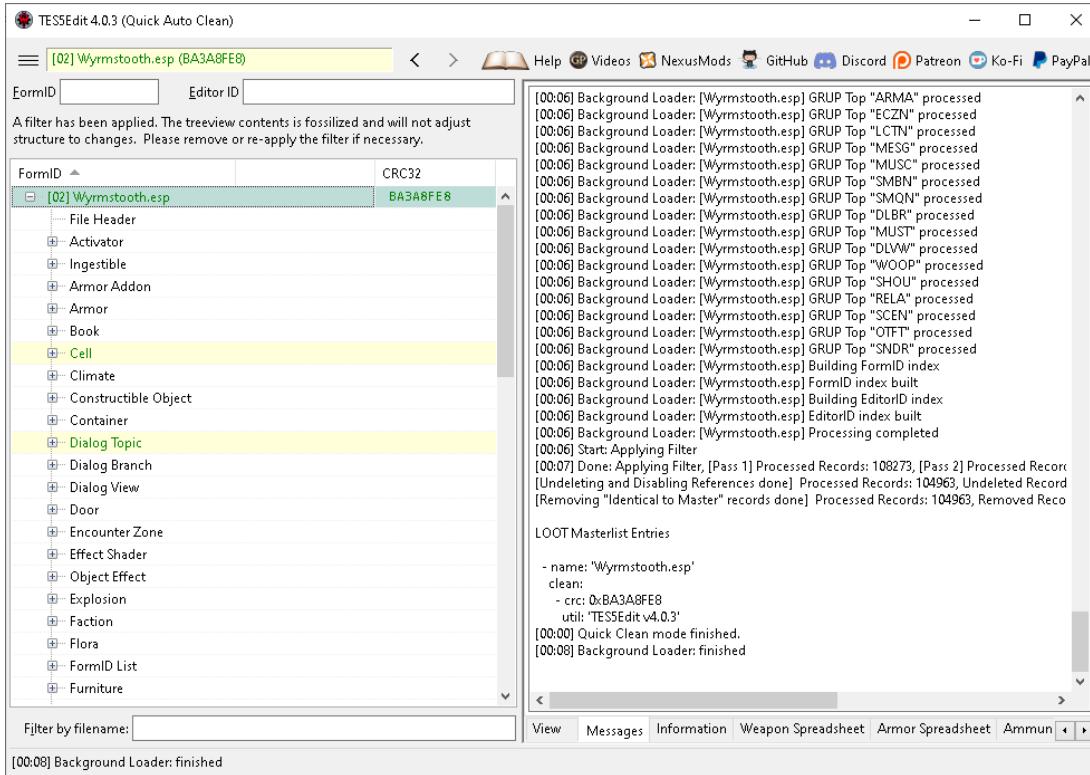


Figure 1507 - TES5Edit Quick Auto Clean Complete.

CHECKING FOR ERRORS IN XEDIT

The error checking feature in xEdit can be used to check for bad records which may potentially cause crashes in-game.

Launch xEdit.

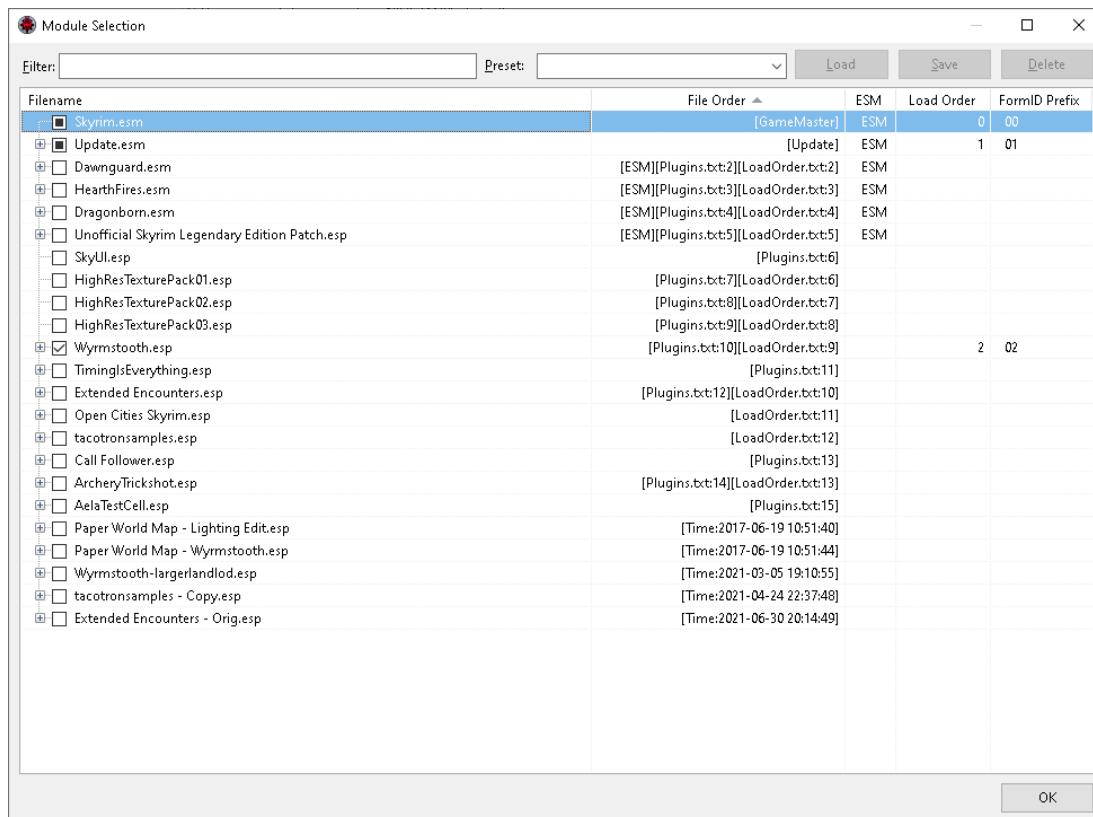


Figure 1508 - TES5Edit Module Selection.

Make sure your .esp file is selected and click OK.

Wait until the background loader has finished.

Right-click on your mod and select ‘Check for Errors’.

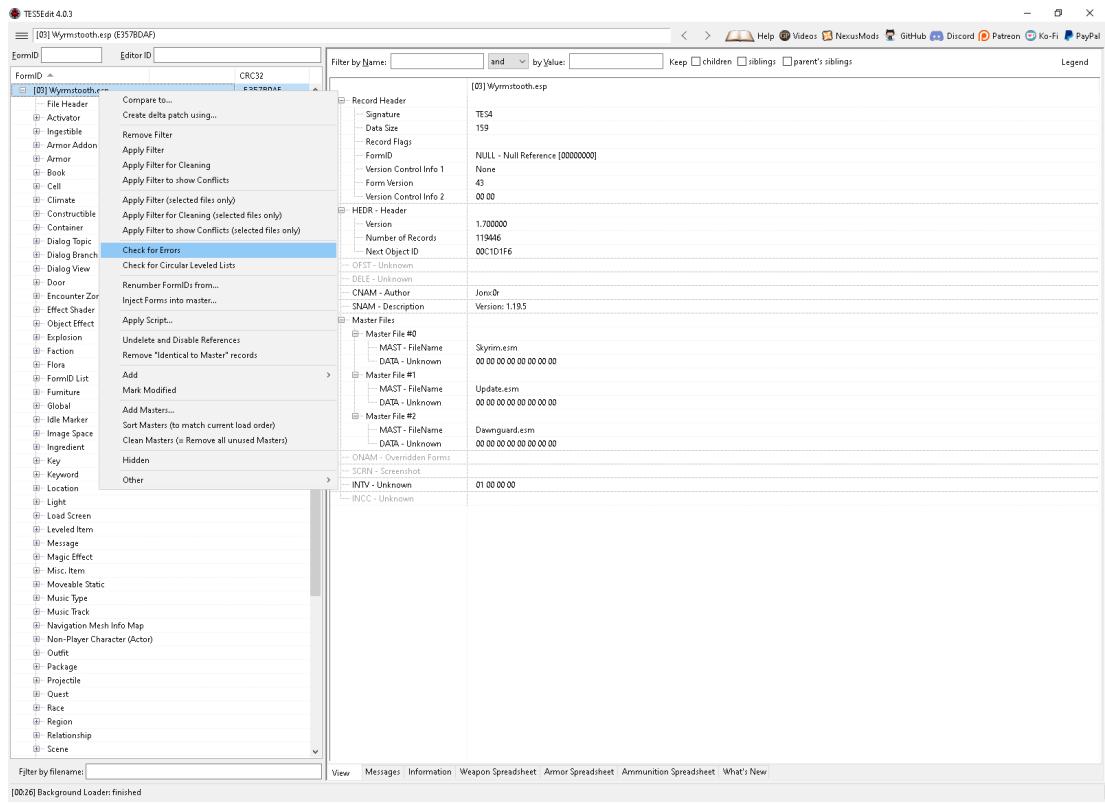


Figure 1509 - Selecting 'Check For Errors'.

Once the process is complete, the output should state ‘Done: Checking for Errors’.

For good measure, right-click on your mod and select 'Check for Circular Leveled Lists' as well.

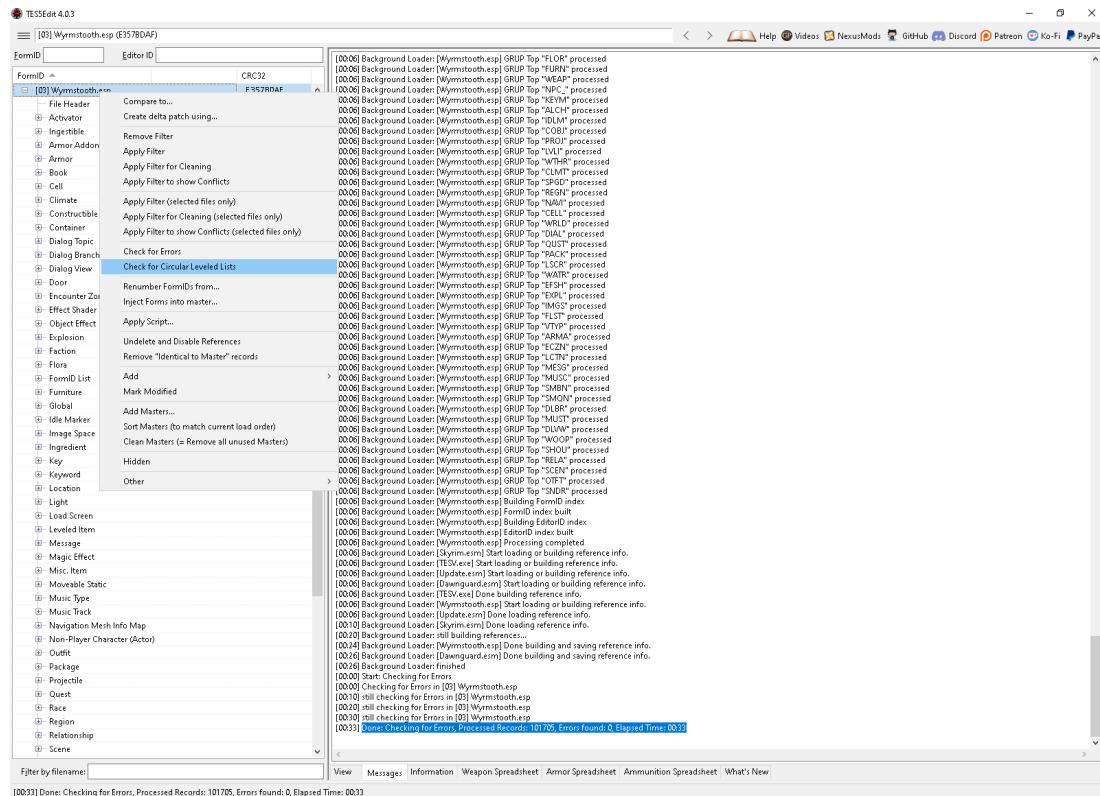


Figure 1510 - Check for Circular Levelled Lists.

Click on the Burger Menu and select Save, or press CTRL + S to save any changes.

ESM-IFYING YOUR MOD IN XEDIT

Skyrim's DLC (Dawnguard, Hearthfire, Dragonborn) contain an 'esm' flag. This flag allows other mods to treat the DLC as master files, so you can use content from them in your mods. You can add the 'esm' flag to your own mod to allow other mods to build upon it in the same manner.

Launch xEdit.

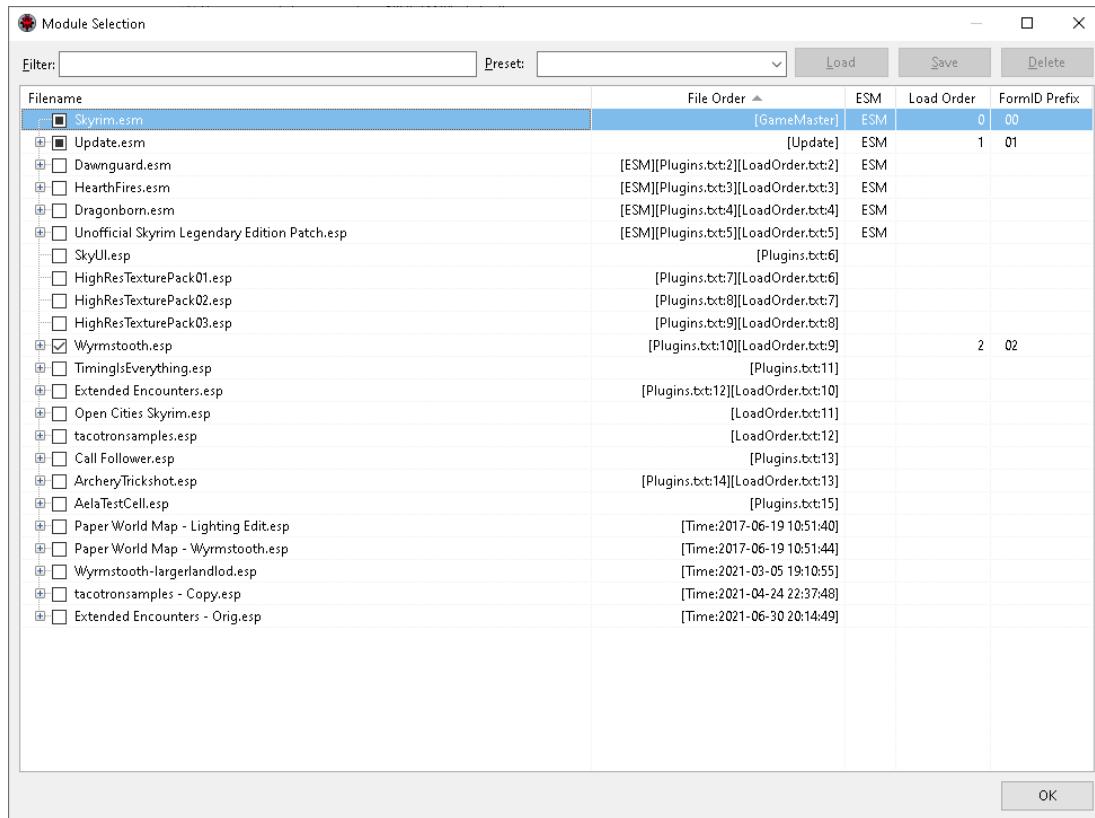


Figure 1511 - TES5Edit Module Selection.

Make sure your .esp file is selected and click OK.

Wait until the background loader has finished.

Right-click on the column to the right of Record Flags and select Edit.

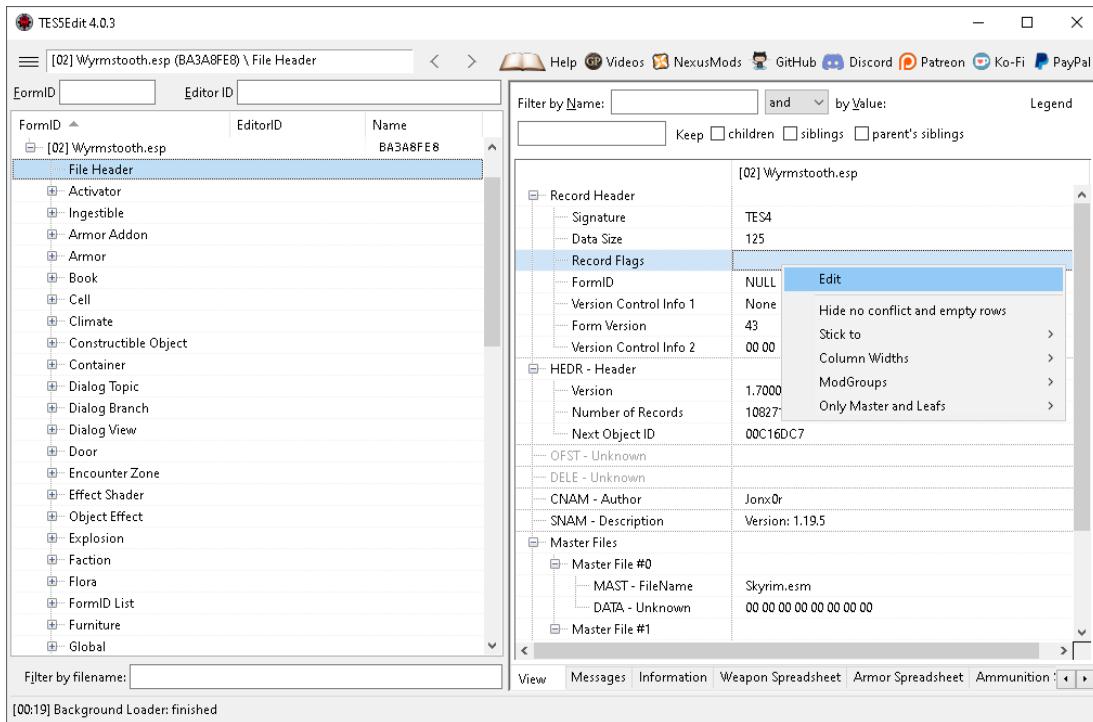


Figure 1512 - TES5Edit.

You'll see a warning about editing a module file. Click 'Yes I'm absolutely sure'.

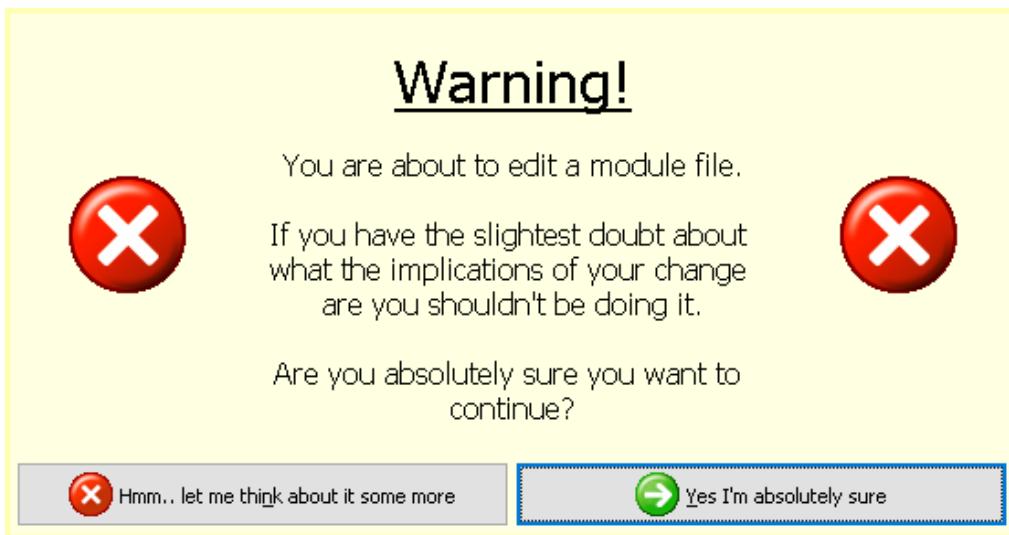


Figure 1513 - TES5Edit change warning.

Tick the 'ESM' tick box then click OK.

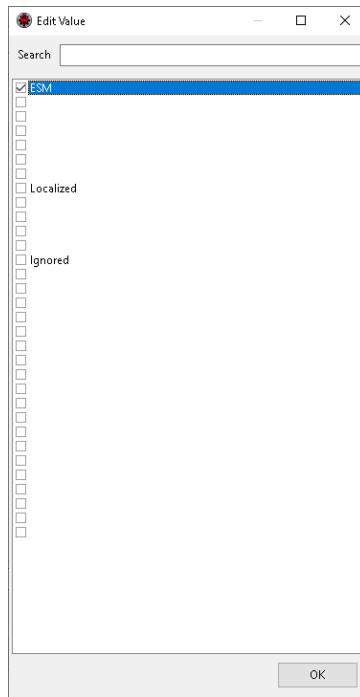


Figure 1514 - TES5Edit Edit Value.

Go to the burger menu and select Save, or press CTRL + S to save this change. Optionally, you can also change the file extension of your mod from .esp to .esm.

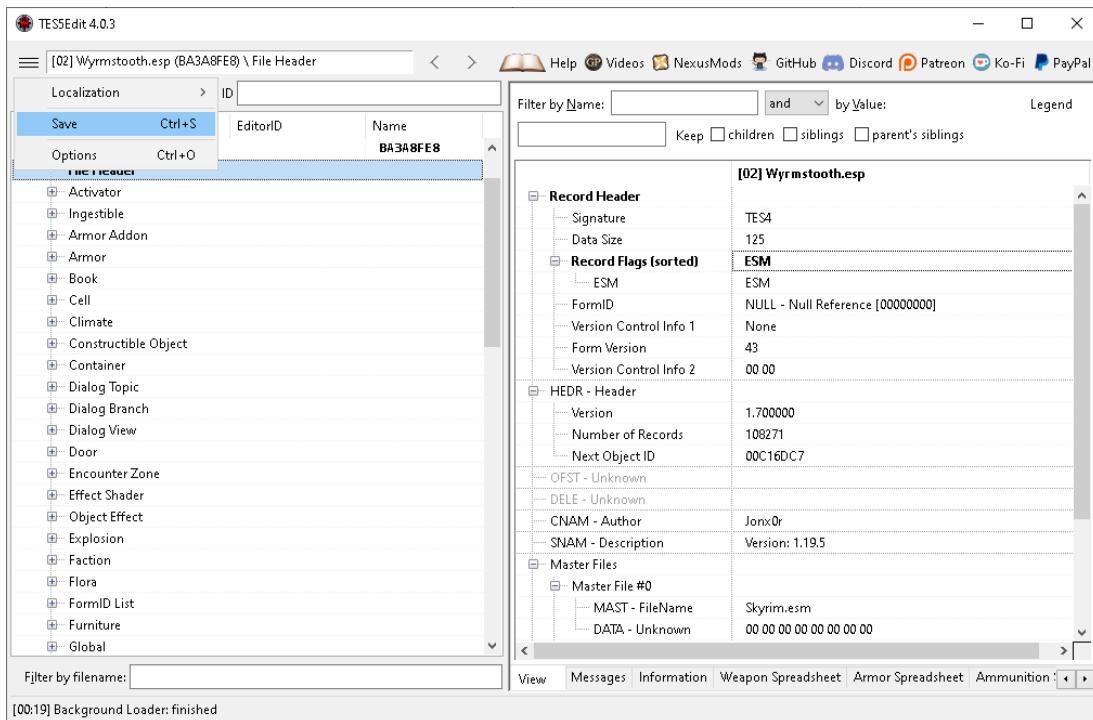


Figure 1515 - TES5Edit Save.

GENERATING PAPYRUS DEBUGGING TRACE

Before packaging your mod, you should do a playtest with papyrus debugging enabled. Papyrus debugging will help identify issues with any of your scripts.

You can enable papyrus debugging in your Skyrim.ini file under the [Papyrus] section.

The Skyrim.ini file is located under C:\Users\<YourUsername>\Documents\my games\Skyrim for Skyrim and C:\Users\<YourUsername>\Documents\my games\Skyrim Special Edition for Skyrim Special Edition.

Set bEnableLogging to 1 and bEnableTrace to 1 as per the screenshot below.

If these entries don't exist, add them in.



```

Skyrim.INI - Notepad
File Edit Format View Help
bAllowLoadGrass=0
fGrassMaxStartFadeDistance=7000.0000
fGrassMinStartFadeDistance=0.0000

[Decals]
uMaxSkinDecalPerActor=60

[LightingShader]
fDecalLODFadeStart=0.45
fDecalLODFadeEnd=0.5

[Imagespace]
iRadialBlurLevel=2

[GeneralWarnings]
SGeneralMasterMismatchWarning=One or more plugins could not find the correct versions of the master files they depend on. Errors may occur during load or

[Archive]
sResourceArchiveList=Skyrim - Misc.bsa, Skyrim - Shaders.bsa, Skyrim - Interface.bsa, Skyrim - Animations.bsa, Skyrim - Meshes0.bsa, Skyrim - Meshes1.bsa,
sResourceArchiveList2=Skyrim - Voices_en0.bsa, Skyrim - Textures0.bsa, Skyrim - Textures1.bsa, Skyrim - Textures2.bsa, Skyrim - Textures3.bsa, Skyrim - Te
bLoadArchiveInMemory=1
sArchiveToLoadInMemoryList=Skyrim - Animations.bsa

[Combat]
fMagnetismStrafeHeadingMult=0.0
fMagnetismLookingMult=0.0

[Actor]
bUseNavMeshForMovement=0

[Papyrus]
fPostLoadUpdateTimeMS=500.0
bEnableLogging=1
bEnableTrace=1
bLoadDebugInformation=0

```

Figure 1516 - Enabling papyrus debugging in the Skyrim.ini file.

When you launch the game, a Logs\Script folder will be created containing a Papyrus.#.log file. Each time you launch the game, a new .log file is created, up to a total of four log files.

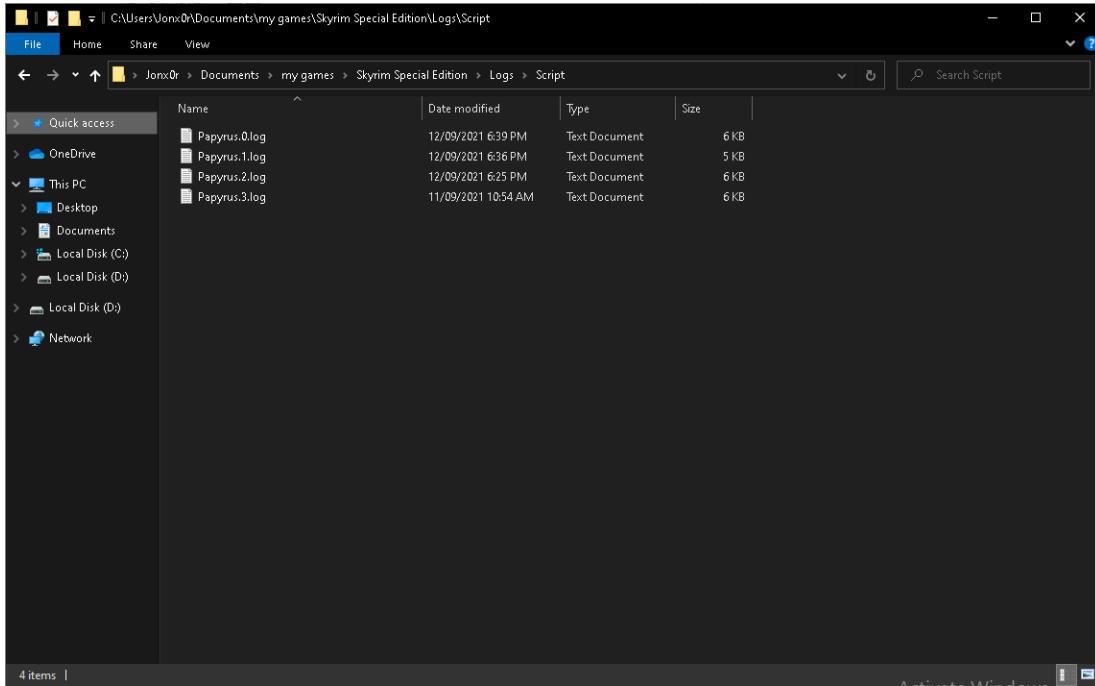


Figure 1517 - Log files.

Before each release, I do a full play-through of the main quest in Wyrmstooth and any side-quests that changed since the last update, then check the log file for warnings or errors.

Each log file contains the papyrus trace.

```

Papyrus.0.log - Notepad
File Edit Format View Help
[09/12/2021 - 06:37:45PM] Papyrus log opened (PC)
[09/12/2021 - 06:37:45PM] Update budget: 1.200000ms (Extra tasklet budget: 1.200000ms, Load screen budget: 500.000000ms)
[09/12/2021 - 06:37:45PM] Memory page: 128 (min) 512 (max) 153600 (max total)
[09/12/2021 - 06:37:48PM] Cannot open store for class "DLC1testPhialtronach", missing file?
[09/12/2021 - 06:38:09PM] [skl_activeeffectsWidget <SKI_ActiveEffectsWidgetInstance (07000822)>] INITIALIZED
[09/12/2021 - 06:38:09PM] [skl_activeeffectsWidget <SKI_ActiveEffectsWidgetInstance (07000822)>]: Updating to script version 2
[09/12/2021 - 06:38:09PM] Error: File "Unofficial Skyrim Legendary Edition Patch.esp" does not exist or is not currently loaded.
stack:
<unknown self>.Game.GetFormFromFile() - "<native>" Line ?
[USLEEPVersionTracking (0500F458)].USLEEP_VersionTrackingScript.ProcessRetroScripts() - "USLEEP_VersionTrackingScript.psc" Line ?
[USLEEPVersionTracking (0500F458)].USLEEP_VersionTrackingScript.OnInit() - "USLEEP_VersionTrackingScript.psc" Line ?
[09/12/2021 - 06:38:09PM] Error: File "Unofficial Skyrim Patch.esp" does not exist or is not currently loaded.
stack:
<unknown self>.Game.GetFormFromFile() - "<native>" Line ?
[USLEEPVersionTracking (0500F458)].USLEEP_VersionTrackingScript.ProcessRetroScripts() - "USLEEP_VersionTrackingScript.psc" Line ?
[USLEEPVersionTracking (0500F458)].USLEEP_VersionTrackingScript.OnInit() - "USLEEP_VersionTrackingScript.psc" Line ?
[09/12/2021 - 06:38:09PM] Error: File "Unofficial Dawnguard Patch.esp" does not exist or is not currently loaded.
stack:
<unknown self>.Game.GetFormFromFile() - "<native>" Line ?
[USLEEPVersionTracking (0500F458)].USLEEP_VersionTrackingScript.ProcessRetroScripts() - "USLEEP_VersionTrackingScript.psc" Line ?
[USLEEPVersionTracking (0500F458)].USLEEP_VersionTrackingScript.OnInit() - "USLEEP_VersionTrackingScript.psc" Line ?
[09/12/2021 - 06:38:09PM] Error: File "Unofficial Hearthfire Patch.esp" does not exist or is not currently loaded.
stack:
<unknown self>.Game.GetFormFromFile() - "<native>" Line ?
[USLEEPVersionTracking (0500F458)].USLEEP_VersionTrackingScript.ProcessRetroScripts() - "USLEEP_VersionTrackingScript.psc" Line ?
[USLEEPVersionTracking (0500F458)].USLEEP_VersionTrackingScript.OnInit() - "USLEEP_VersionTrackingScript.psc" Line ?
[09/12/2021 - 06:38:09PM] Error: File "Unofficial Dragonborn Patch.esp" does not exist or is not currently loaded.
stack:
<unknown self>.Game.GetFormFromFile() - "<native>" Line ?
[USLEEPVersionTracking (0500F458)].USLEEP_VersionTrackingScript.ProcessRetroScripts() - "USLEEP_VersionTrackingScript.psc" Line ?
[USLEEPVersionTracking (0500F458)].USLEEP_VersionTrackingScript.OnInit() - "USLEEP_VersionTrackingScript.psc" Line ?
[09/12/2021 - 06:38:09PM] PATCH 1.0 QUEST HAS STARTED
[09/12/2021 - 06:38:09PM] DLC1: Starting DLC1 Initialization quest.
[09/12/2021 - 06:38:09PM] [DLC2_QF_DLC2_M004_02016E02 <DLC2Init (04016E02)>] DLC2Init quest START
[09/12/2021 - 06:38:10PM] [SKI_ConfigMenu <SKI_ConfigMenuInstance (07000820)>] INITIALIZED
[09/12/2021 - 06:38:10PM] [SKI_ConfigMenu <SKI_ConfigMenuInstance (07000820)>]: Updating to script version 2
Total 113 / 100M 00:38:10.000113 [SVT Configuration] <SVT Configuration> Instance (0700007001). Updating to script version 2

```

Figure 1518 - Papyrus debug.

Most of the trace will come from the base game, DLCs, and other mods you have loaded.

All my scripts for Wyrmstooth are prefixed with 'WT' so I search for that prefix to look for warnings or errors that are relevant to my mod.

When you're done testing your papyrus scripts, don't forget to set bEnableLogging and bEnableTrace back to 0.

CREATING A .BIK VIDEO FILE

This section will cover the steps required to compress an .avi video in the .bik format so that it can be played in-game.

In order to do this, we'll need a copy of [RAD Game Tools](#).

For this example, I'll be working with a video I put together in Adobe After Effects. This video is used in Wyrmsooth and plays when the player travels to the island for the first time.

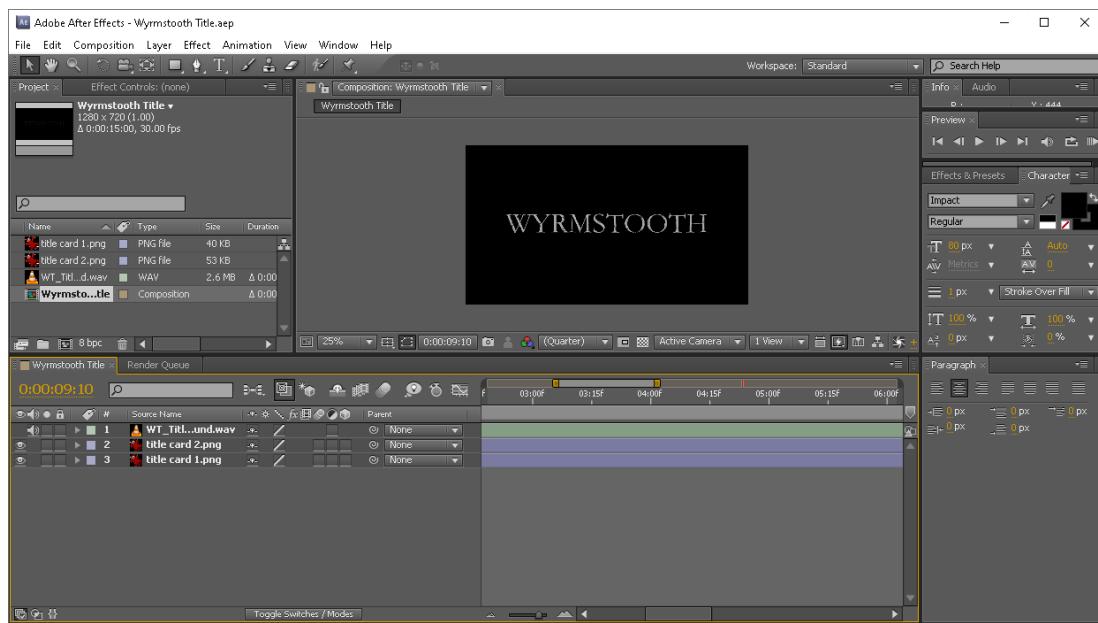


Figure 1519 - The video to convert to .bik.

The first thing we'll need to do is render an .avi file at lossless quality.

As per the screenshot below, I set Render Settings to Best Settings and Output Module to Lossless.



Figure 1520 - Rendering from After Effects.

Important: This will result in a very large file, so make sure you have enough disk space to work with!

Once the .avi file has rendered, open RAD Video Tools.

Select the .avi file and press the 'Bink it!' button.

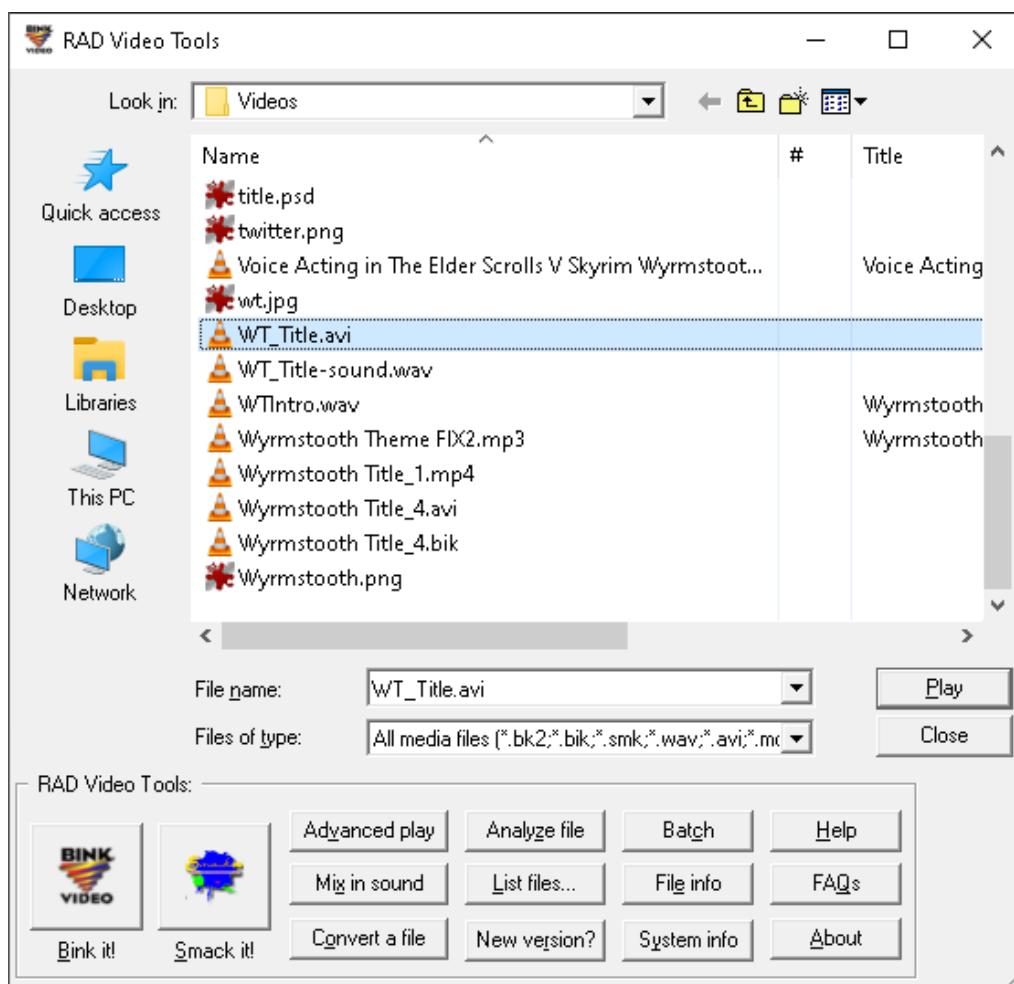


Figure 1521 - Binking the .avi file rendered from After Effects.

Ensure ‘Compress audio’ is ticked. Set the ‘Compress level’ to 0 and ‘Convert to rate’ to 44050.

For ‘Convert to what sound format’, tick ‘16-bit/stereo’.

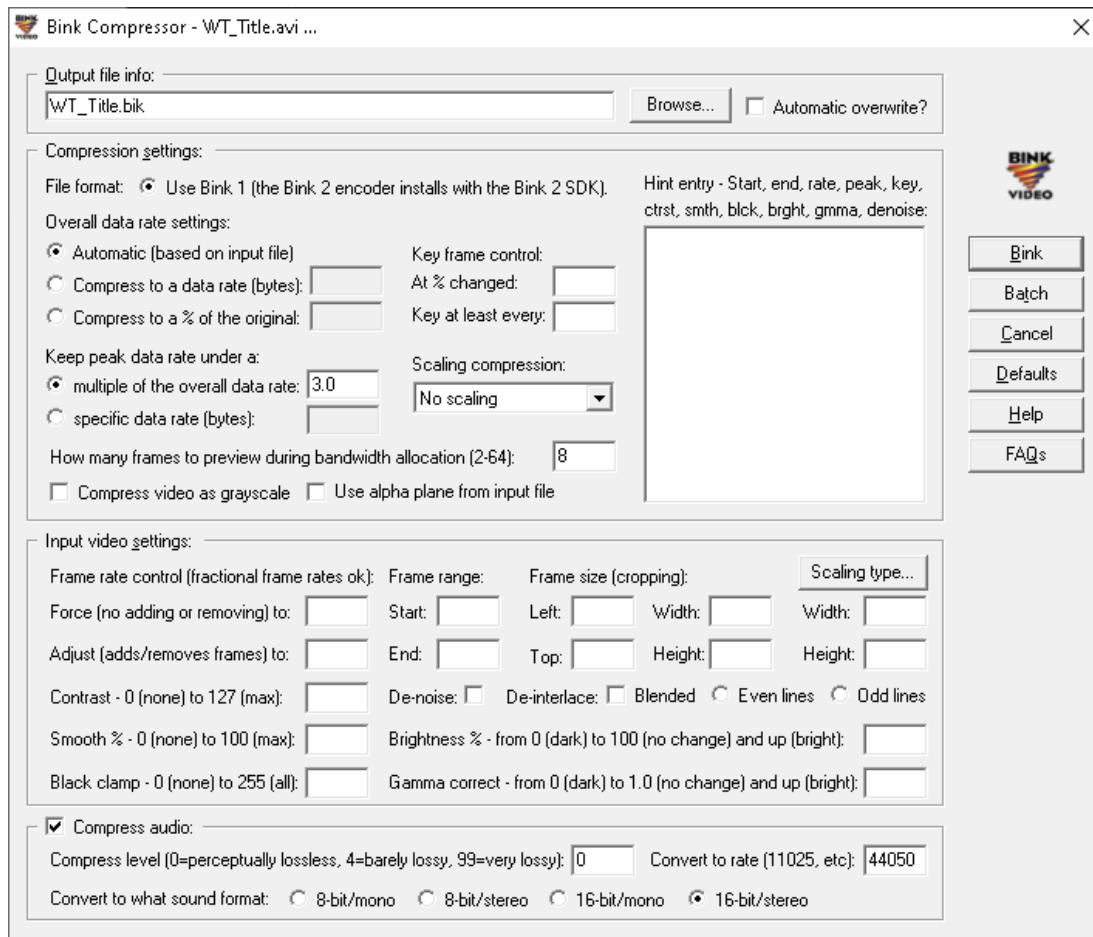


Figure 1522 - Bink settings.

Click Bink to begin compressing the video.

Once it's done, confirm you have a .bik file in the same directory as the .avi file.

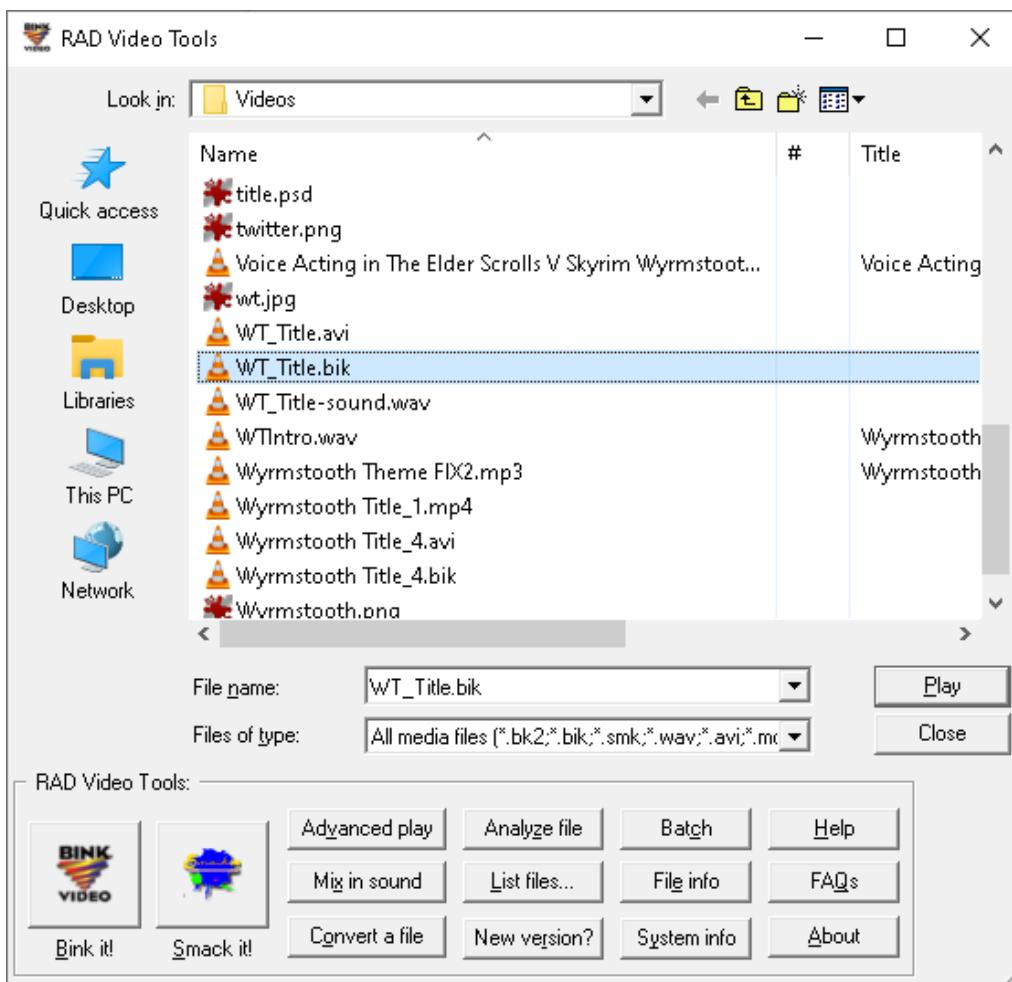


Figure 1523 - .bik file created.

Now we can add it to our mod.

Note: .bik videos cannot be packed into .bsa archives. I include my .bik video in my mod as a loose file.

Copy the .bik file to your Skyrim\Data\Video or Skyrim Special Edition\Data\Video folder.

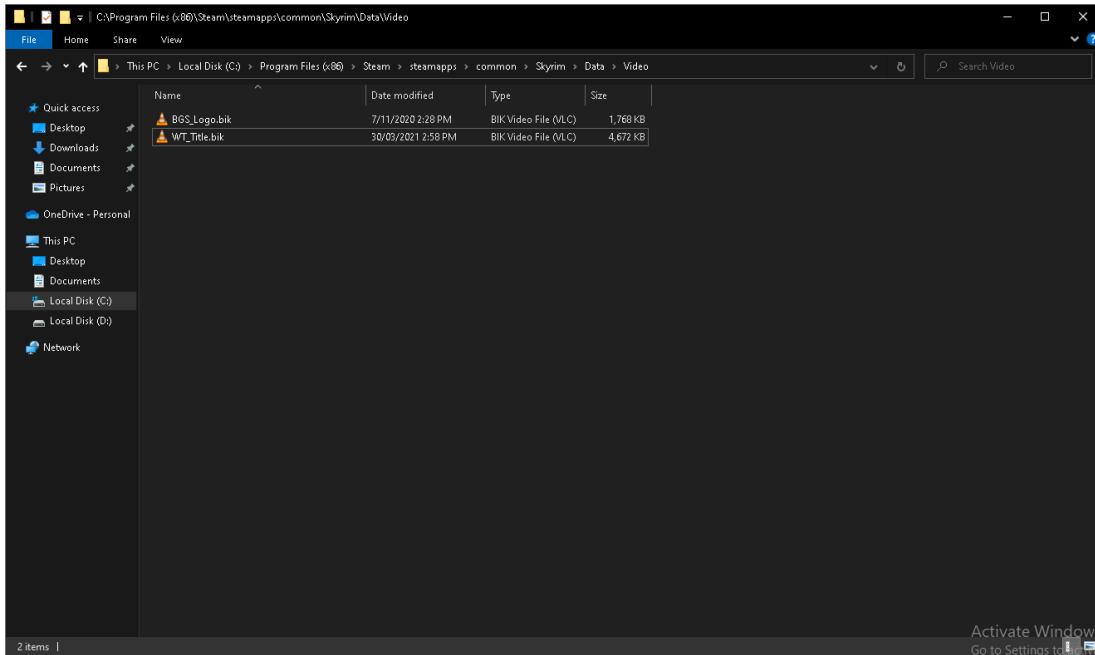


Figure 1524 - .bik file copied to Skyrim directory.

To play a .bik video, use the following papyrus command:

```
game.PlayBink("WT_Title.bik", false, true, true, true)
```

For more information on the [PlayBink](#) command, see the article on the Creation Kit wiki.

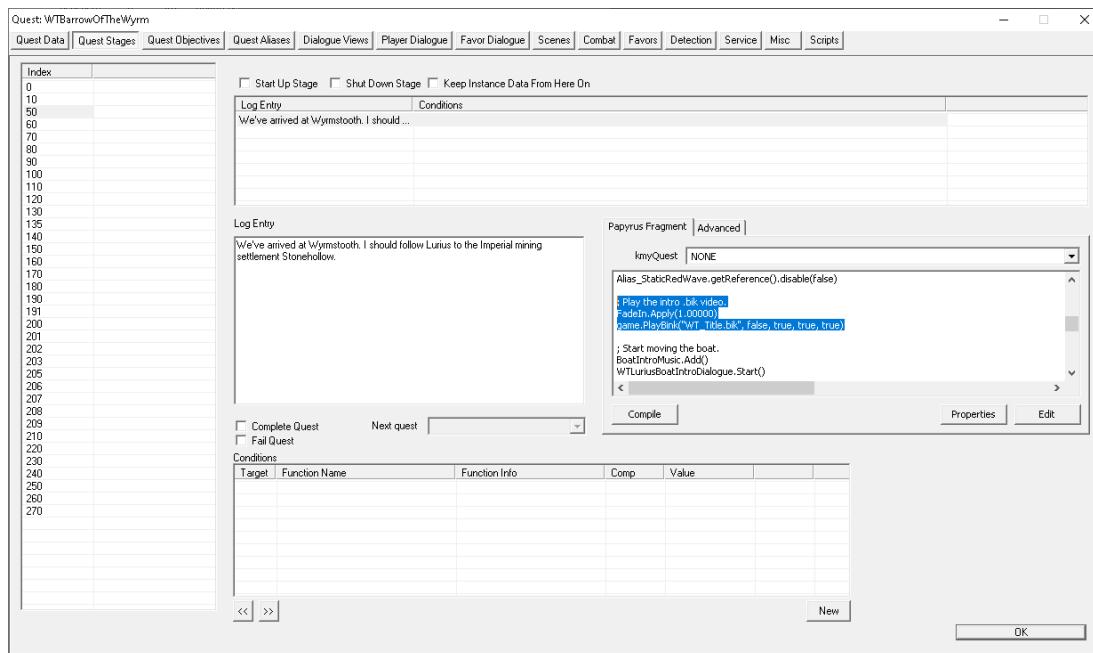


Figure 1525 - Papyrus to play a .bik video.

CHAPTER 12: PACKAGING THE MOD FOR RELEASE

PORTING YOUR MOD TO SKYRIM SPECIAL EDITION

If you developed your mod for the original version of Skyrim and would like to port it to Special Edition, this section will guide you through that process.

The first thing you need to do is copy the .esp file from your Skyrim Data folder to your Skyrim Special Edition Data folder.

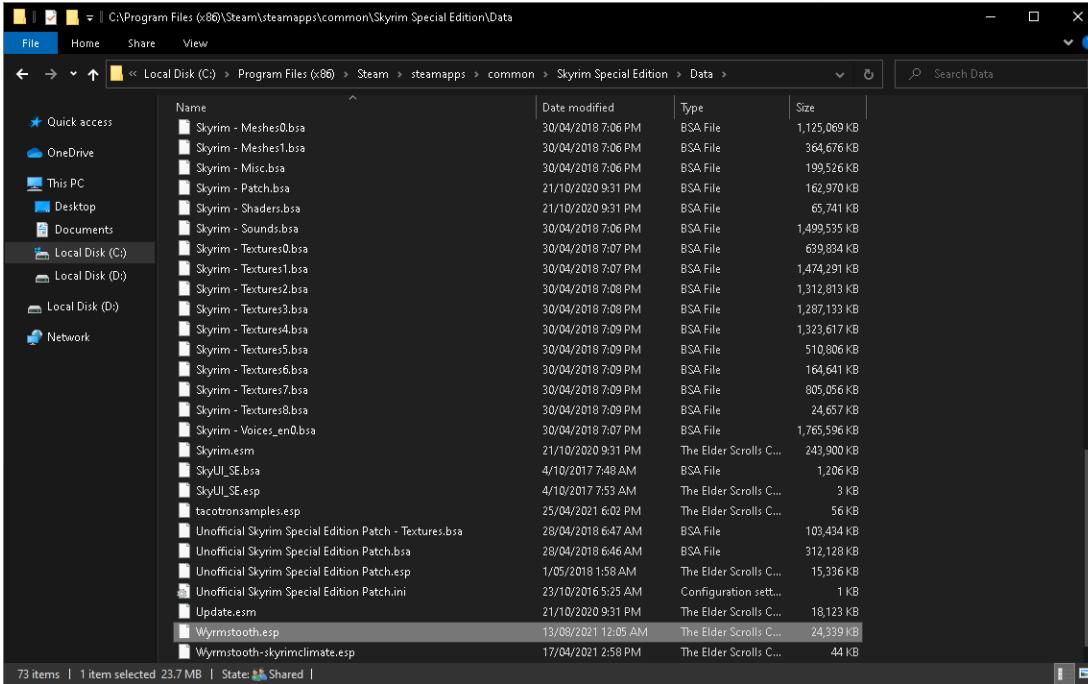


Figure 1526 - Copying the .esp to the Skyrim Special Edition data folder.

Launch the Skyrim Special Edition Creation Kit.

Go to File > Data.

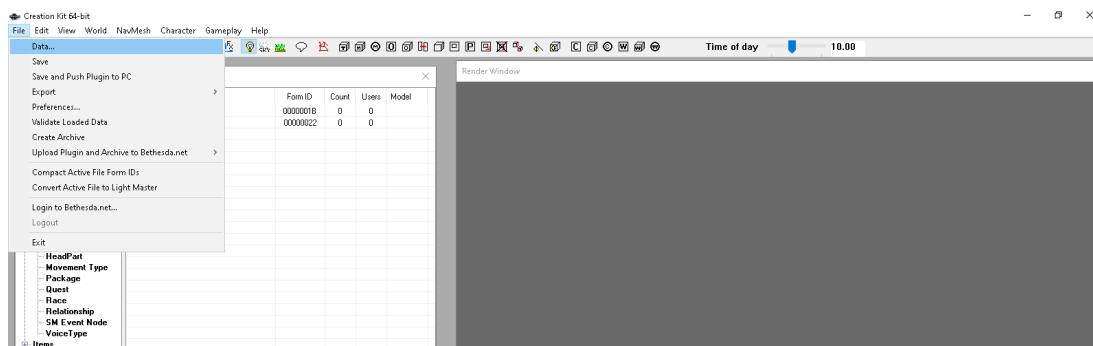


Figure 1527 - The Special Edition Creation Kit.

Tick your mod in the Plugin/Master Files list, click ‘Set as Active File’ and click OK.

Note: If you used xEdit to set the ESM flag in your mod already, you’ll need to remove it first, convert your mod using the following steps, and then you can add it back.

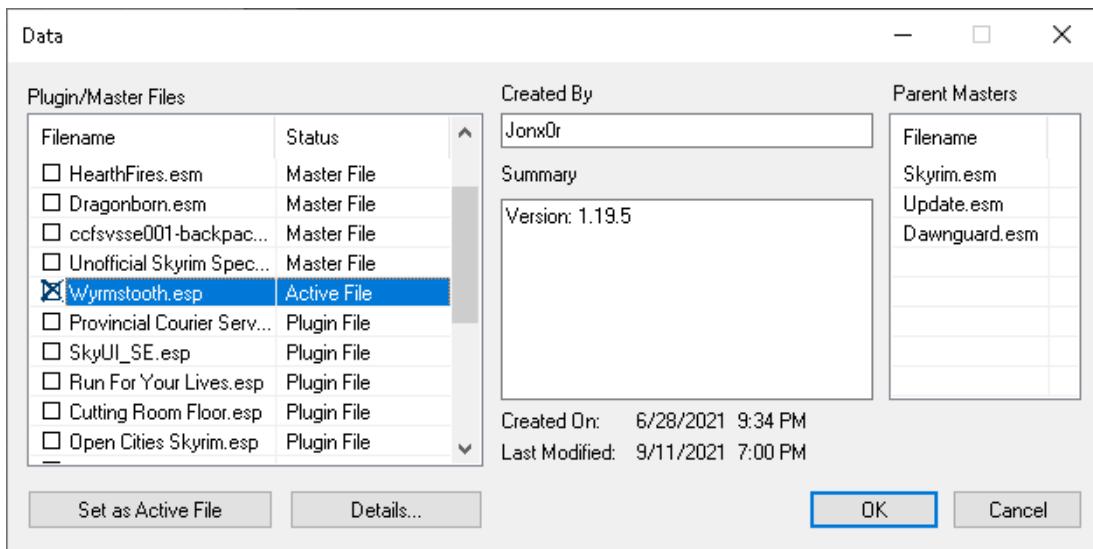


Figure 1528 - Loading your mod.

Let the Creation Kit load your mod.

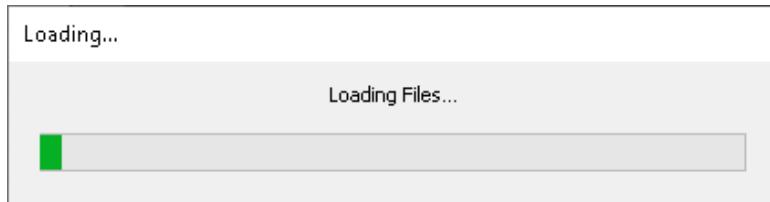


Figure 1529 - Loading progress.

Click ‘Yes to All’ to the countless warning pop-ups.

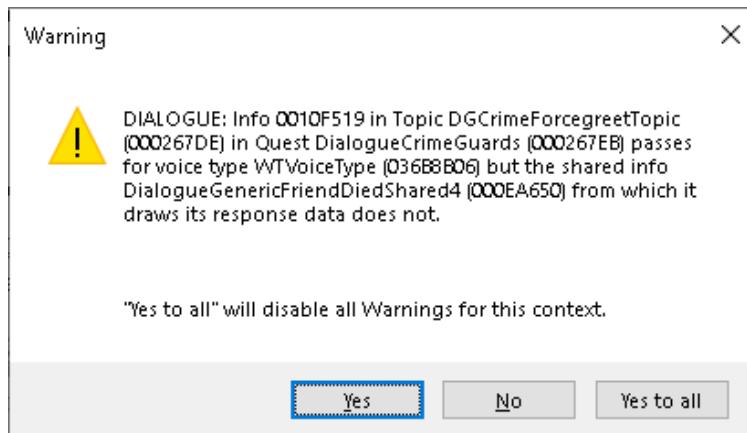


Figure 1530 - Load warnings.

Once the mod loads, take note of the warnings that appear. Most of the time they'll be related to issues in the dependencies.

Some warnings can be ignored, like the one highlighted in the screenshot below.

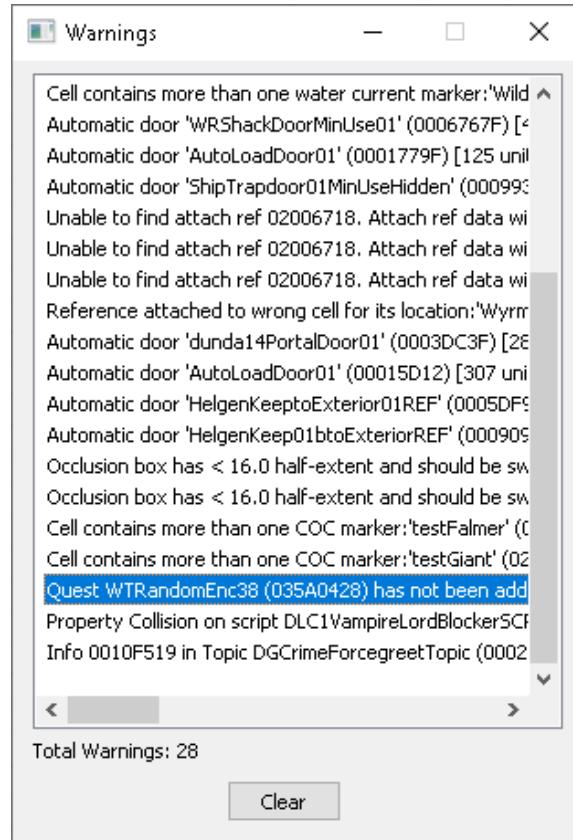


Figure 1531 - Warnings.

Click on the Save button to save your mod.

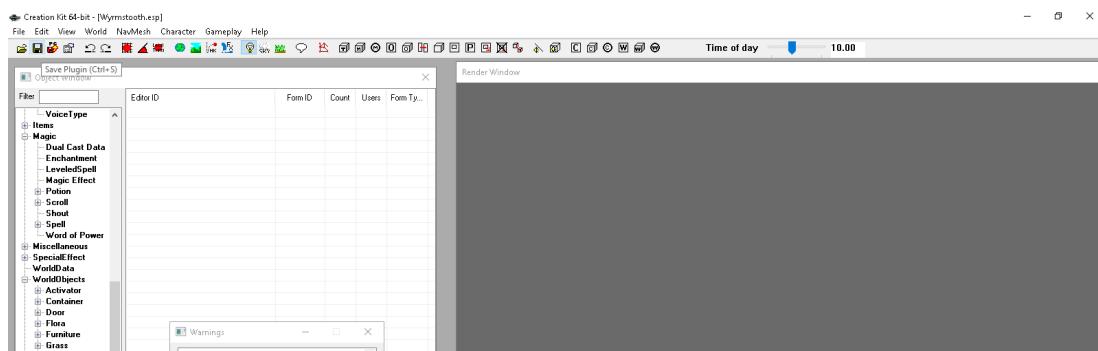


Figure 1532 - Saving the mod.

Now we need to regenerate the facegen data.

You can do this by selecting your NPCs in the Object Window under Actors > Actor, then press CTRL + F4.

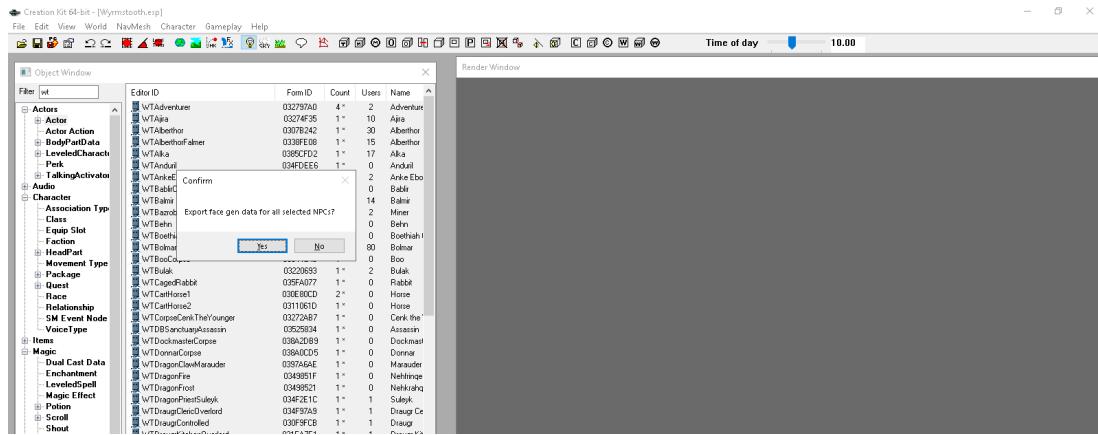


Figure 1533 - Regenerating facegen data.

Click Yes to the confirmation pop-up.

Next we need to convert our .nif files to the SSE format. Before doing this, copy your mod's files from your Skyrim\Data folder to your Skyrim Special Edition\Data folder.

We convert the .nifs automatically using the [SSE NIF Optimizer](#) tool available on Nexusmods.

Run SSE NIF Optimizer.exe.

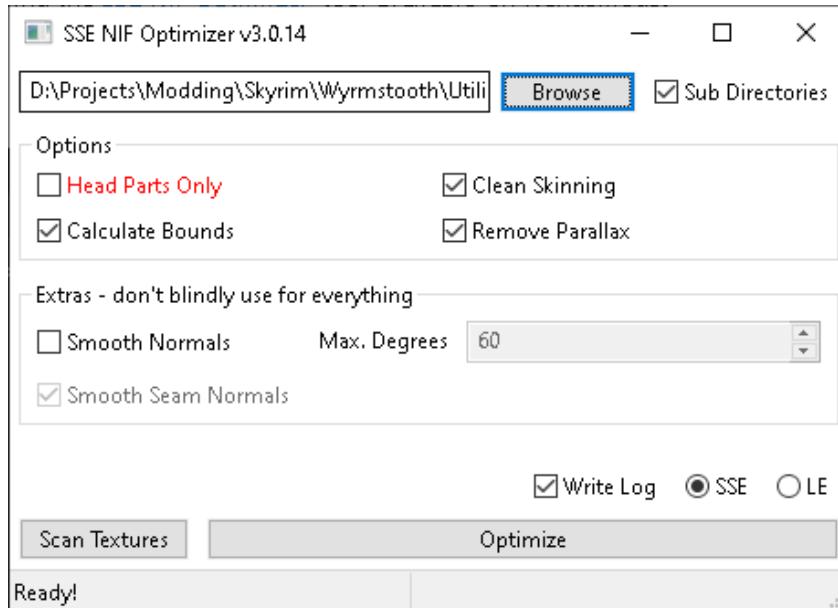


Figure 1534 - SSE NIF Optimizer.

Click on Browse.

Navigate to your Skyrim Special Edition\Data\Meshes folder.

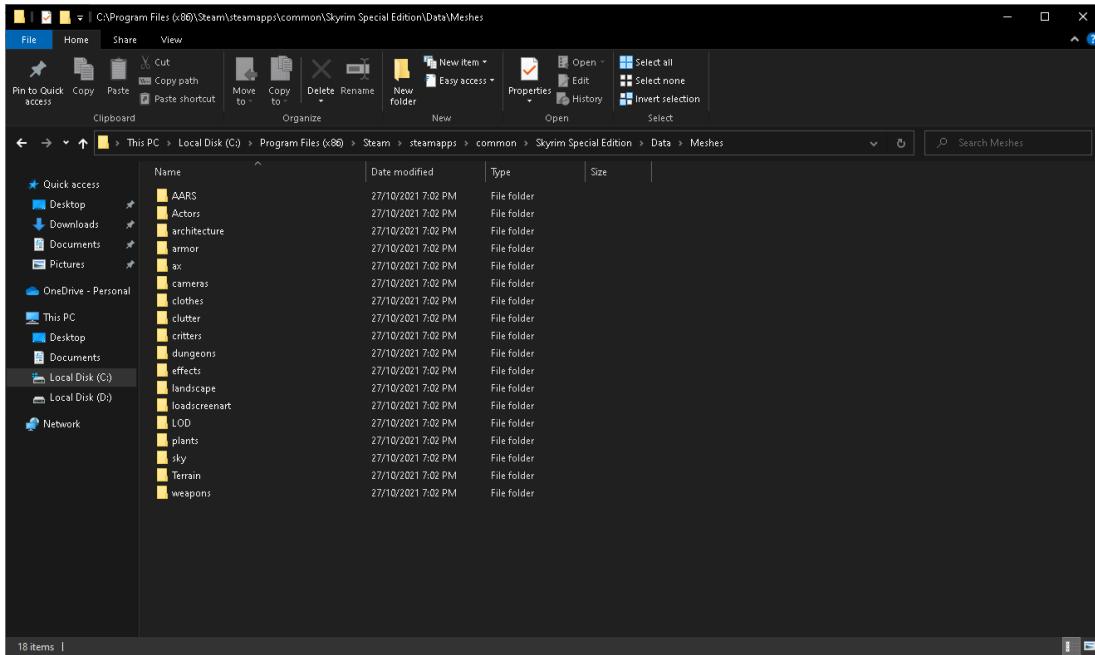


Figure 1535 - Skyrim Special Edition meshes folder.

I would recommend selecting one folder at a time, rather than selecting the entire meshes folder and running the conversion process on all subfolders.

Important: The .nif files under the Skyrim Special Edition\Data\Meshes\Actors\Character\FaceGenData\FaceGeom\<YourModName>.esp folder shouldn't be converted using this tool.

There are also no .nif files under Skyrim Special Edition\Data\Meshes\Terrain to convert, so you don't need to run the SSE NIF Optimizer for that folder.

Click Optimize.

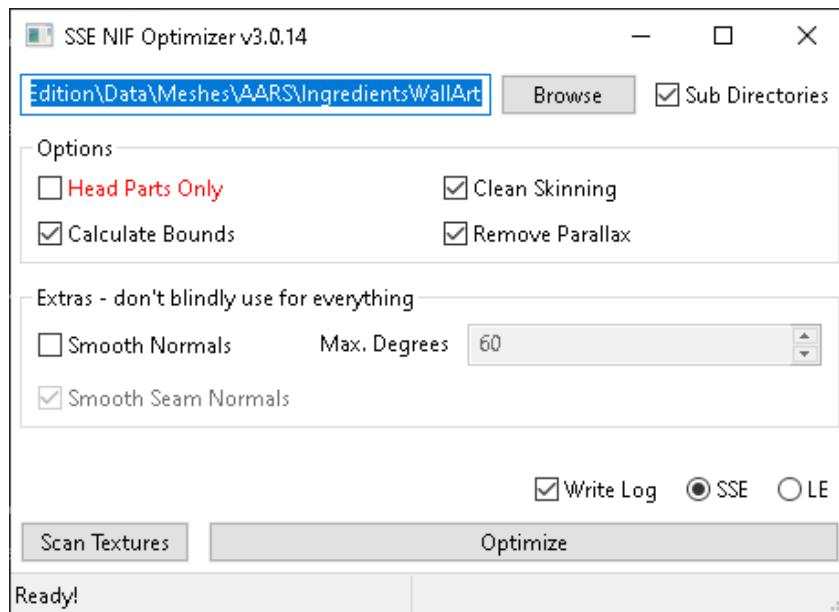


Figure 1536 - Optimizing.

Now you can go ahead and [Package your mod for Skyrim Special Edition](#).

PACKAGING YOUR MOD FOR LEGENDARY EDITION

This section will cover packaging your mod using Bethesda's archive utility.

You can find archive.exe in your Skyrim folder.

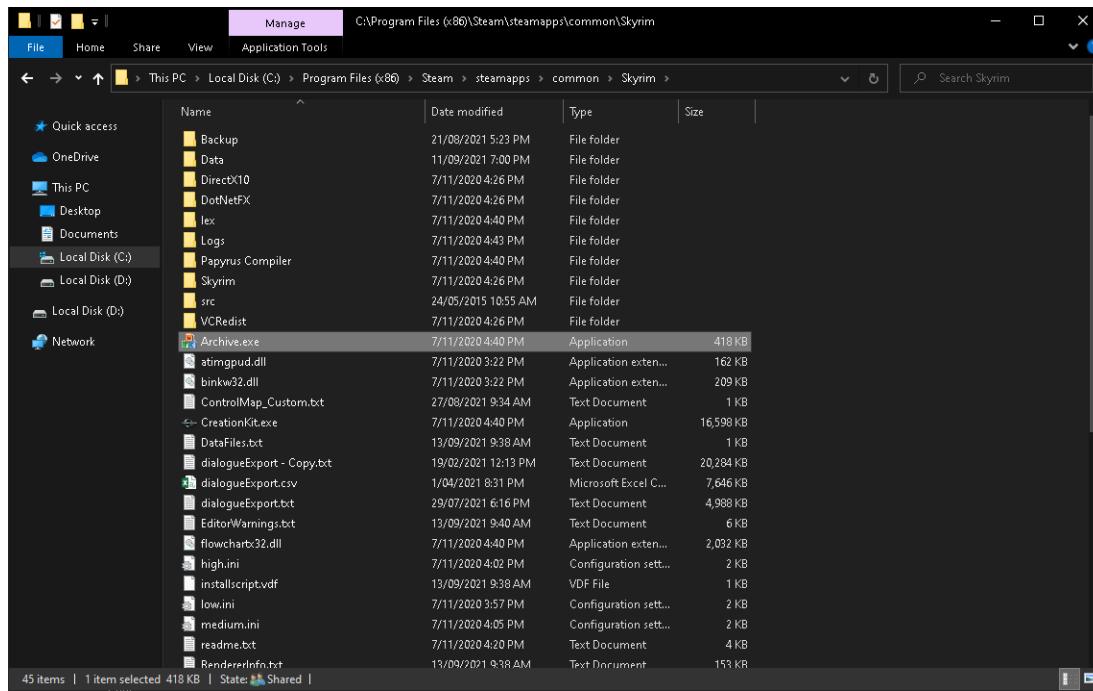


Figure 1537 - Bethesda's archive utility.

Launch archive.exe.



Figure 1538 - TESArchive.

Go to Edit > Add Directory.

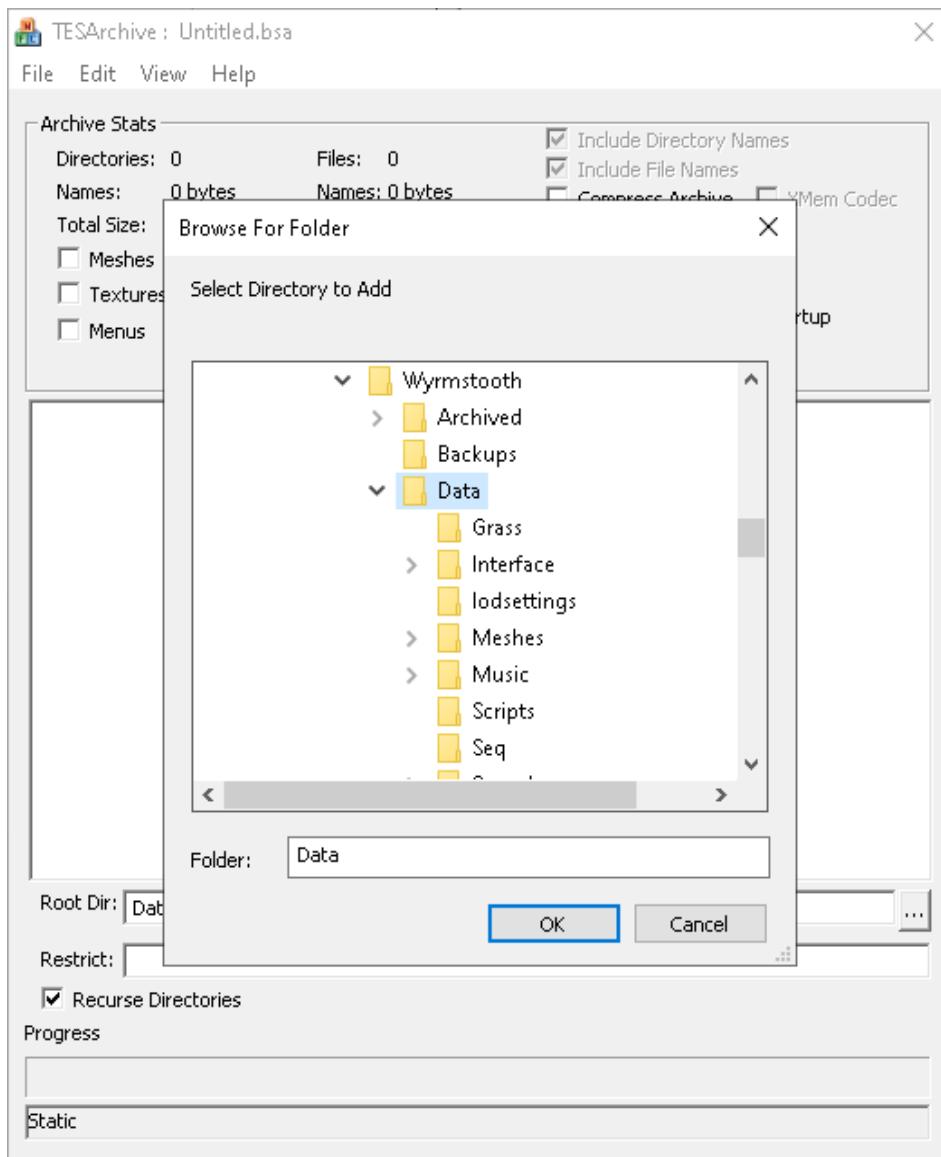


Figure 1539 - Adding your mod assets folder.

Select your mod assets folder. This folder should be named Data and should contain all the assets relating to your mod and ONLY the assets relating to your mod.

Click OK.

Go to Edit > Check All Items to select all assets.

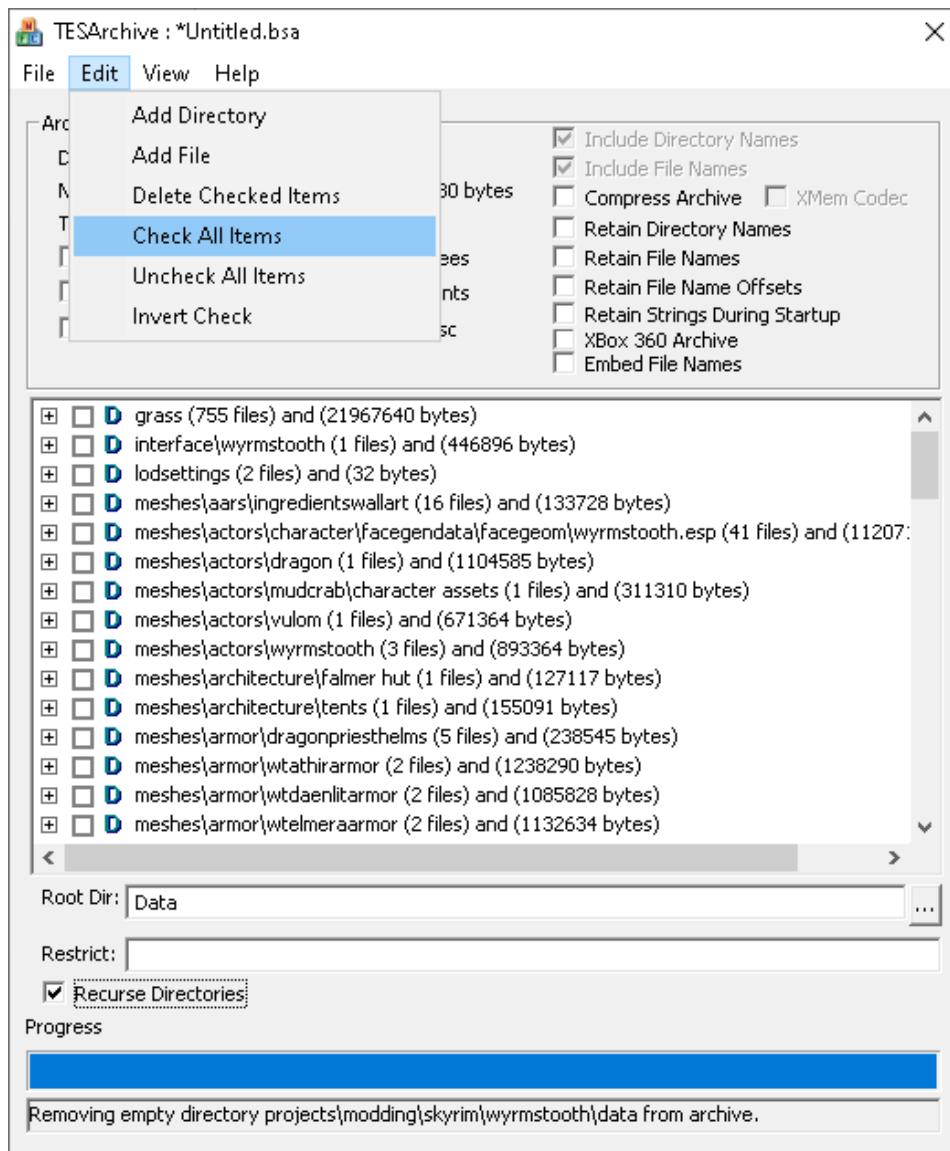


Figure 1540 - Selecting all assets to package.

Under Archive Stats, tick the boxes relating to assets included in your mod. Wyrmsooth, for example, includes Meshes, Textures, Sounds, Voices and some other Misc assets, so I ticked those boxes.

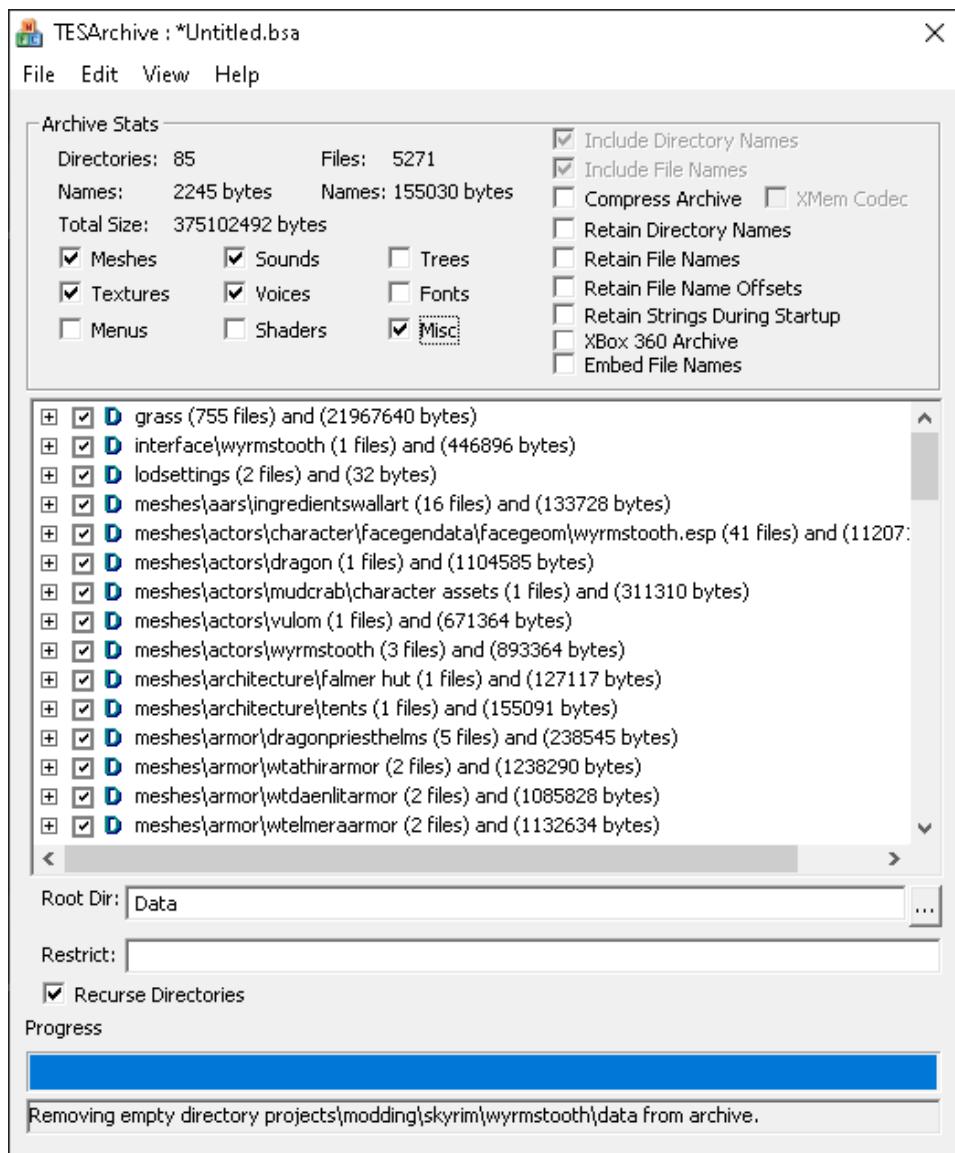


Figure 1541 - Setting the archive type.

Go to File > Save As.

Make sure the name of your .bsa archive matches the name of your .esp file.

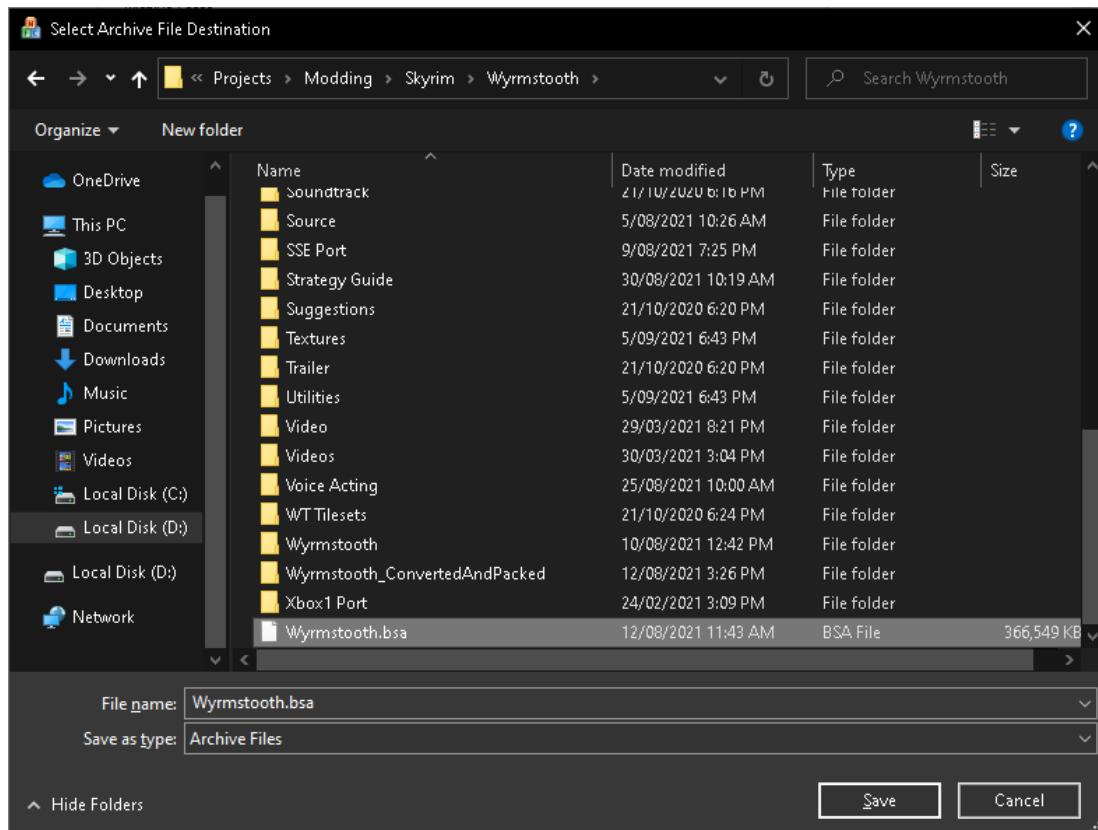


Figure 1542 - Setting a location to save the new archive to.

Click Save to begin packing the archive.

The current process is done when the current task is left at ‘Renaming temporary archive’.

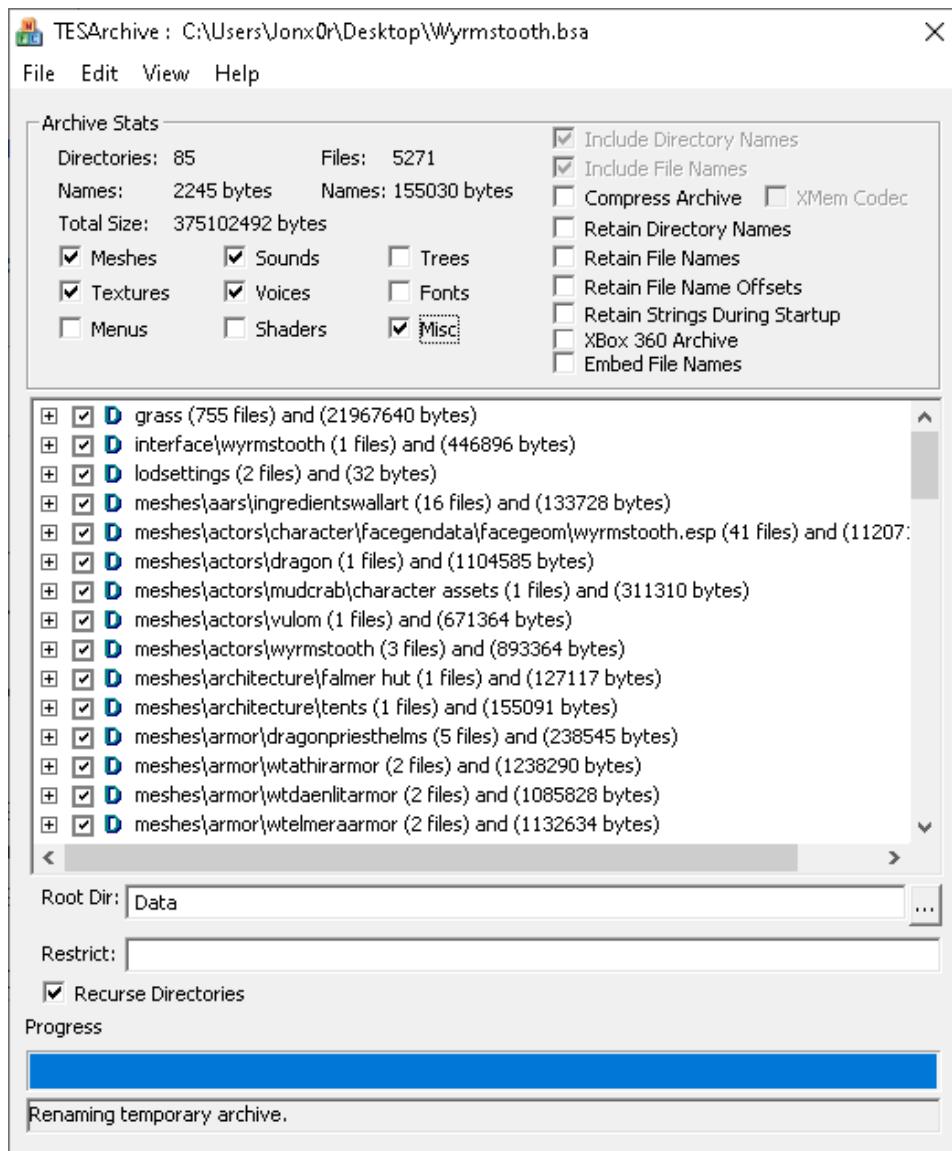


Figure 1543 - Done.

You should have a new .bsa and .bsl file.

I usually copy these files to my Skyrim\Data folder as well.

PACKAGING YOUR MOD FOR SPECIAL EDITION

This section will cover the packaging your mod in the Skyrim Special Edition version of the Creation Kit.

Before launching the Creation Kit, if you already previously packaged a .bsa archive for your mod, you will need to remove it from the Skyrim Special Edition\Data folder first. If you don't, the Creation Kit will hang when trying to make a new archive.

Launch the Creation Kit.

Go to File > Data.

Tick your mod in the Plugin/Master Files list. If your plugin isn't a master file, click 'Set as Active File'.

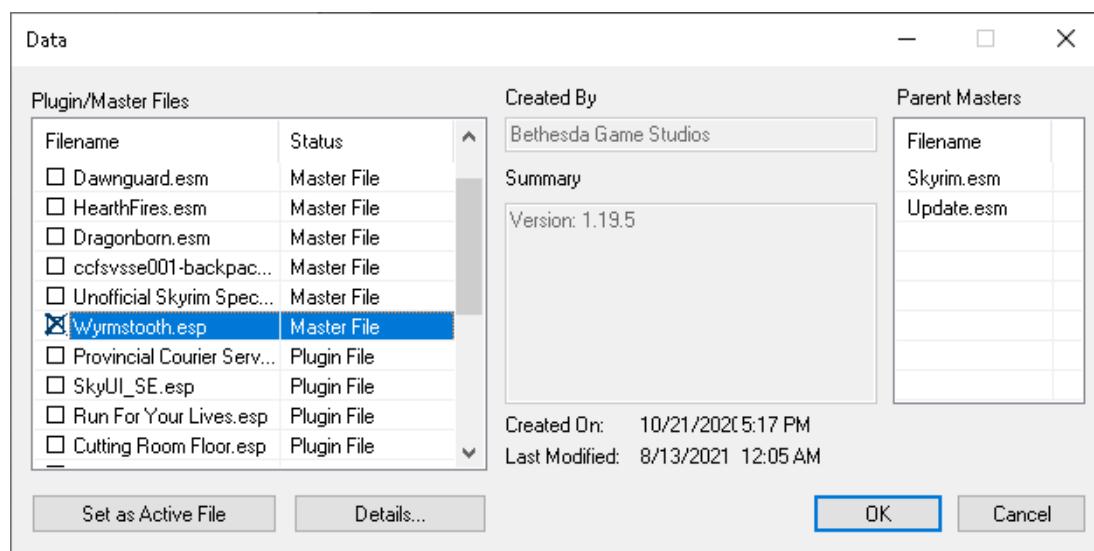


Figure 1544 - Loading your mod.

Click OK to begin loading your mod.

Once the Creation Kit is done loading your mod, go to File > Create Archive.

If your loaded mod is a master file, this list should appear straight away and should be empty.

If your loaded mod isn't a master file, it may take a while for the Creation Kit to search through your mod and automatically detect assets.

If any files are listed here, select them all and remove them as we'll be adding them in manually.

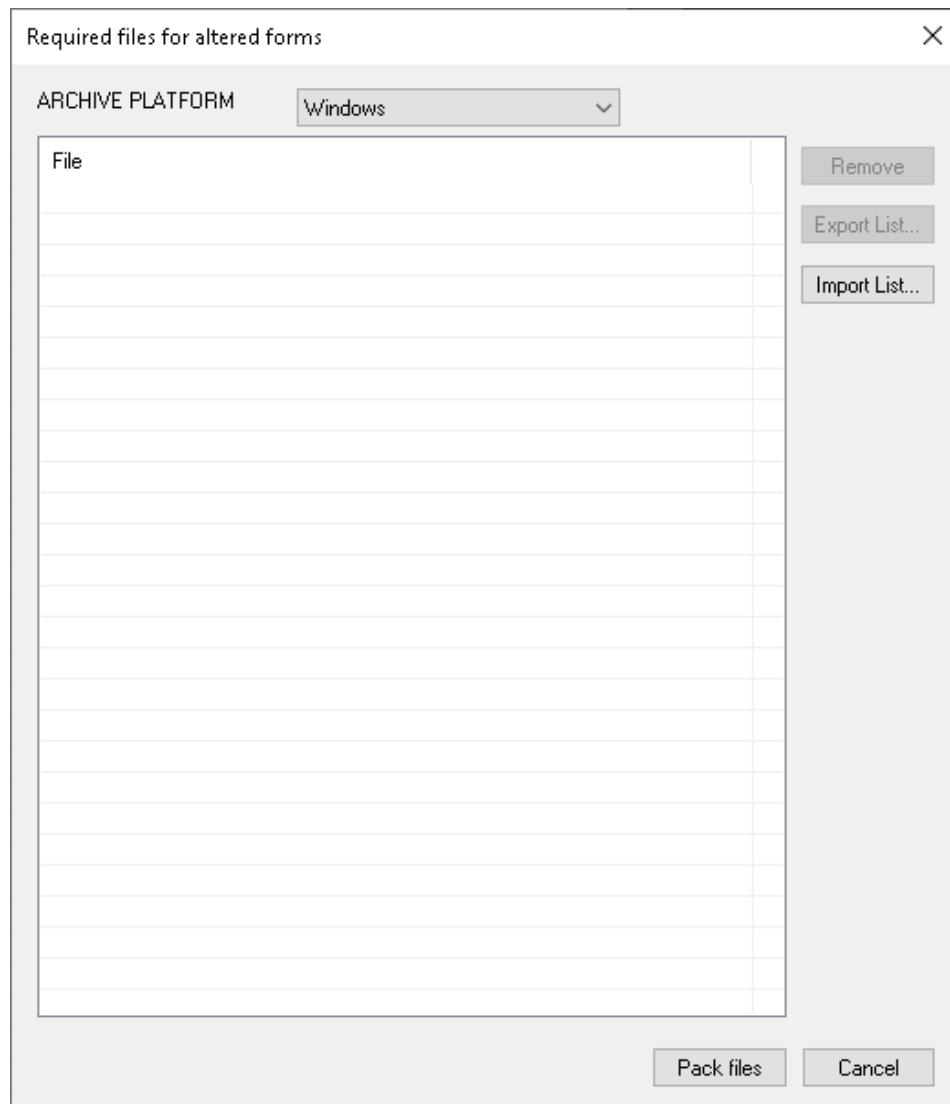


Figure 1545 - Asset list.

To add in your assets to the archive, drag and drop them in from the Skyrim Special Edition\Data folder.

You will need to select the files themselves to drag and drop into the Creation Kit, not the folders or subfolders.

Do not drag and drop in files from a separate project directory. These files need to come from the Skyrim Special Edition\Data folder.

Do not include assets that are not part of your mod.

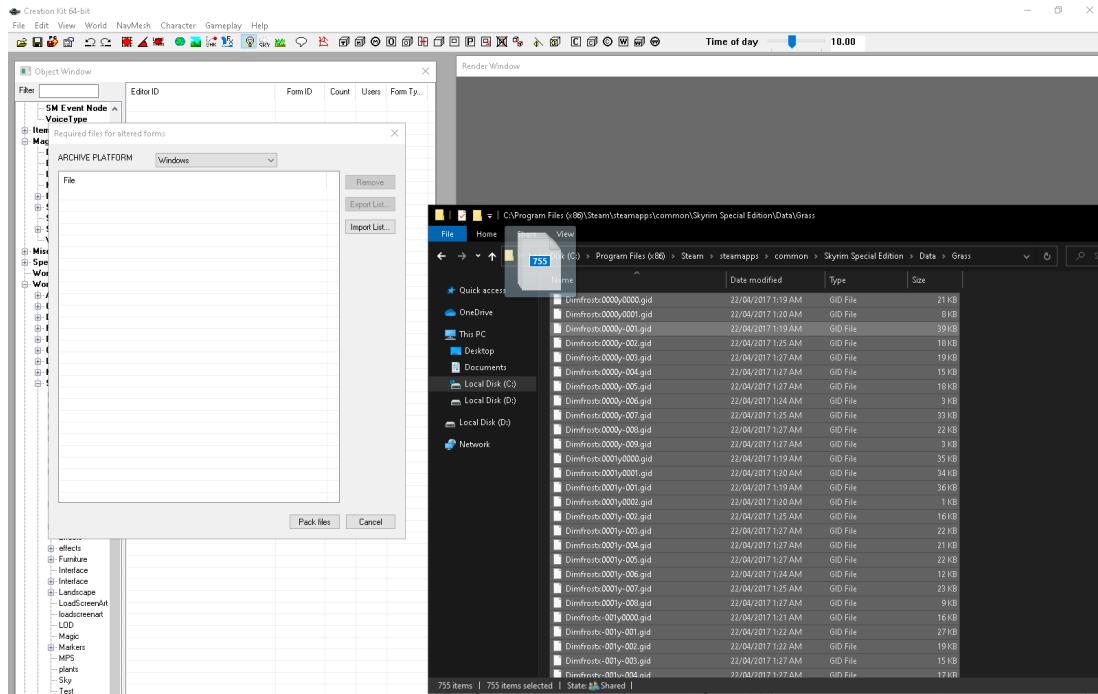


Figure 1546 - Dragging in the .gid grass files into the asset list.

Assets dragged and dropped into the asset list should appear as per the following screenshot:

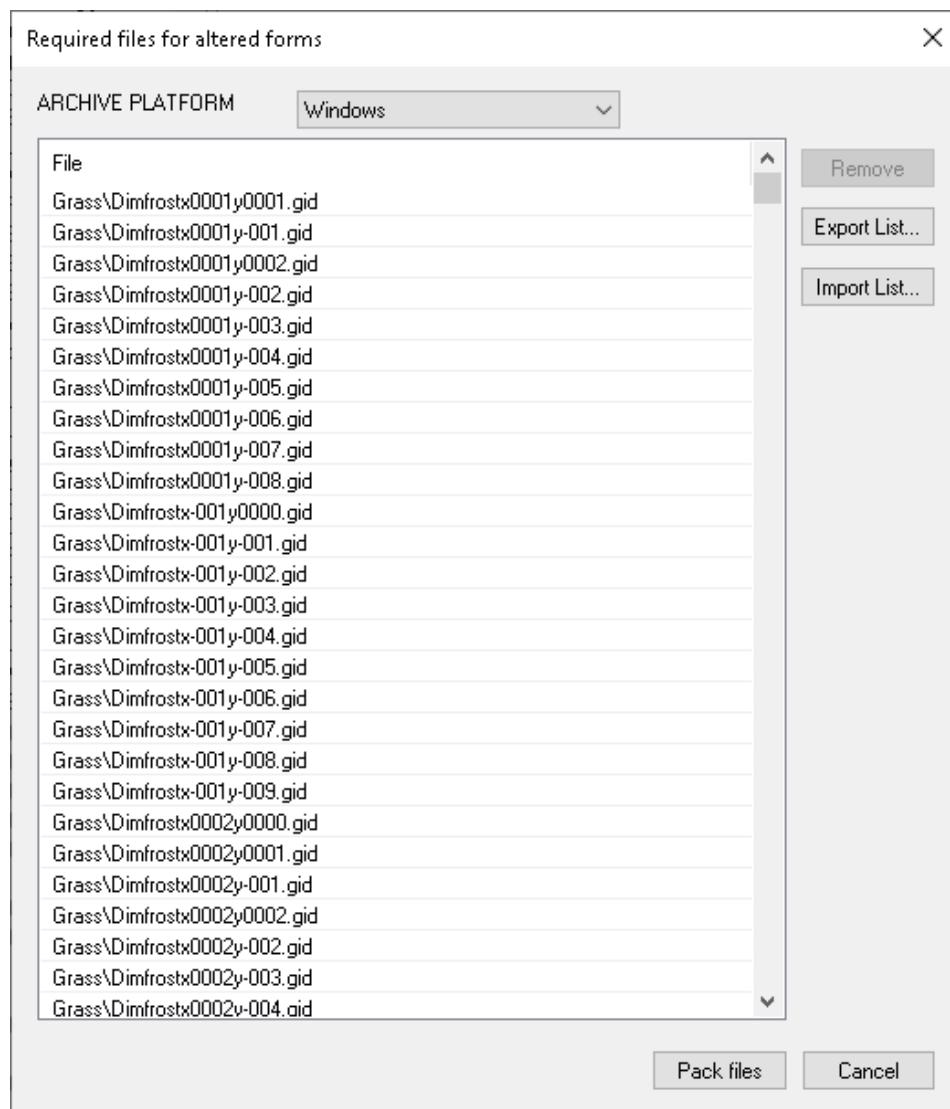


Figure 1547 - .gid grass files added to the asset list.

To make things easier, I only keep loose files belonging to the current mod I'm working on in the Skyrim Special Edition\Data subfolders.

This is so I can use wildcard search terms like `*.*` to select all files in all subdirectories at once.

In the screenshot below, I searched for `*.*` in the Skyrim Special Edition\Data\Sound folder to select all ambient sounds and voice files at once.

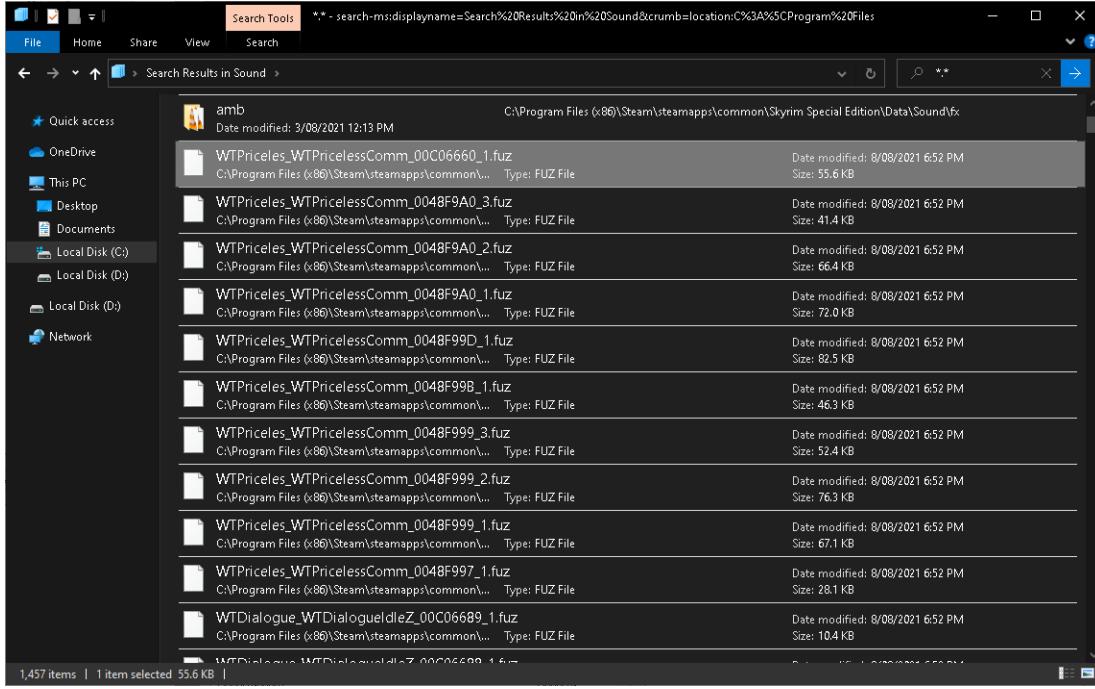


Figure 1548 - Using wildcard search terms.

For texture files, search for ‘*.dds’ to ensure that only .dds files are being added to the list.

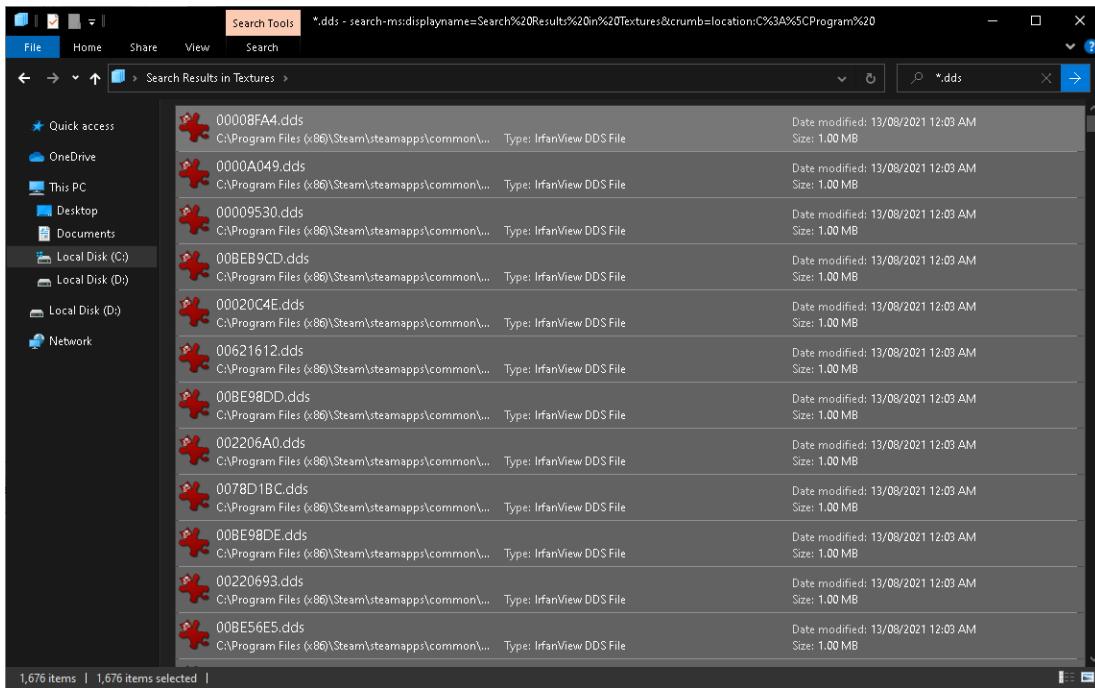


Figure 1549 - Searching by a specific file extension.

Once you've added all assets to the asset list, click on the 'Pack files' button.

You will be prompted to set the name of your main archive first.

Ensure the name of your .bsa archive matches the name of your .esp file.

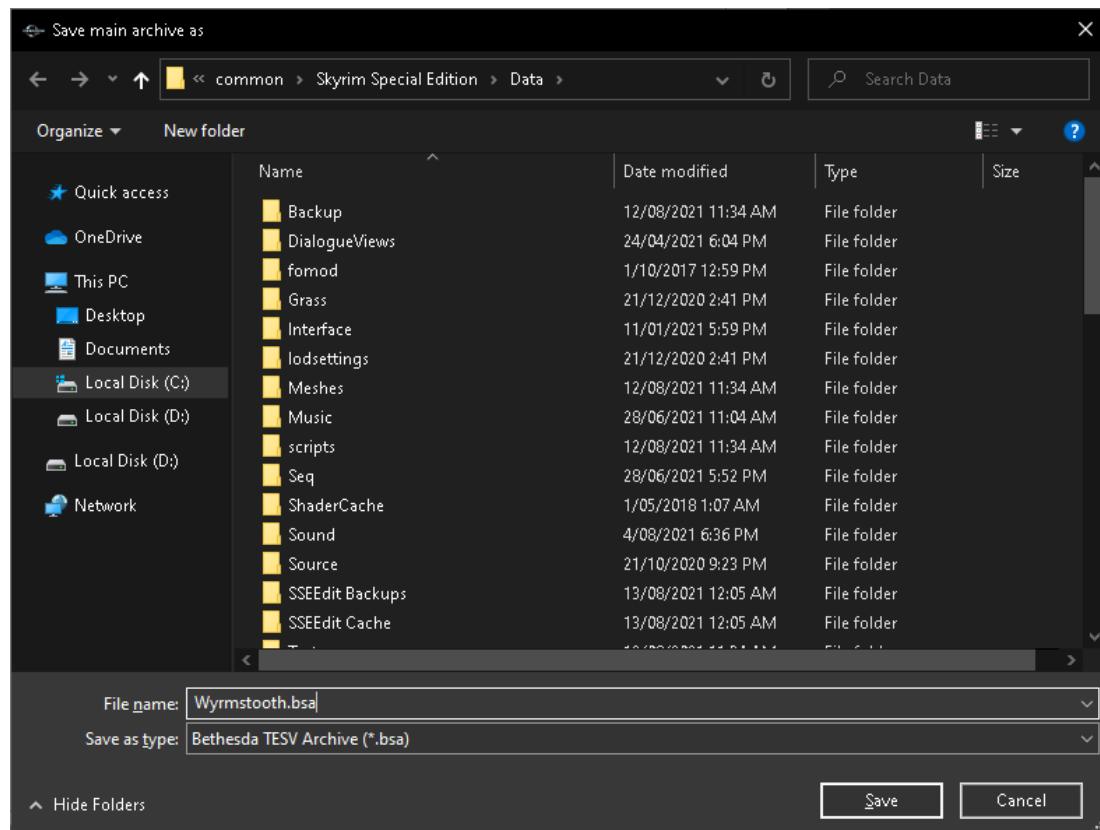


Figure 1550 - Setting the name of the main archive.

Click Save.

If your mod includes textures, you'll need to set the name of the textures archive as well.

This should match the name of your .esp file with ‘ - Textures’ appended to it.

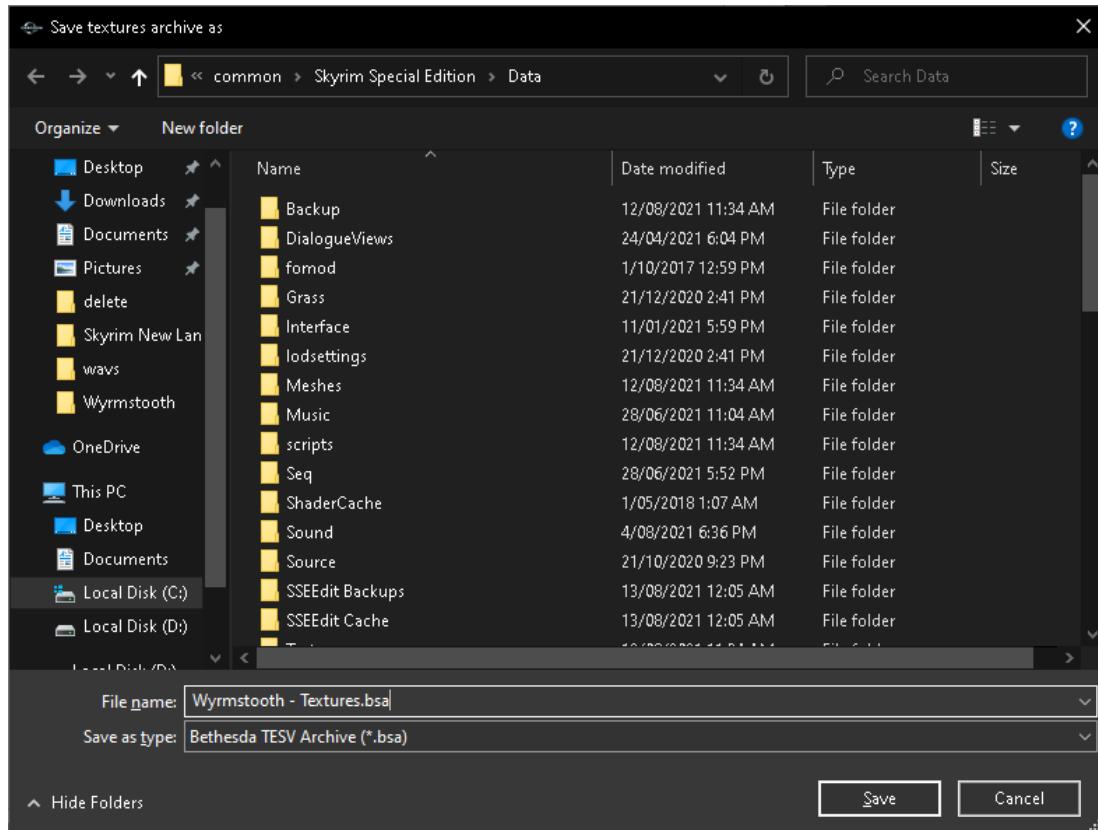


Figure 1551 - Setting the name of the textures archive.

Click Save.

Let the conversion and packing process complete.

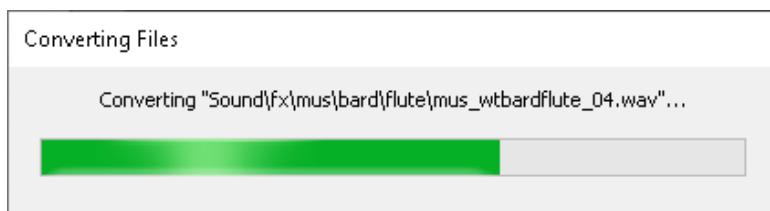


Figure 1552 - Converting files for packing.

Don't touch anything, just let it continue automatically.

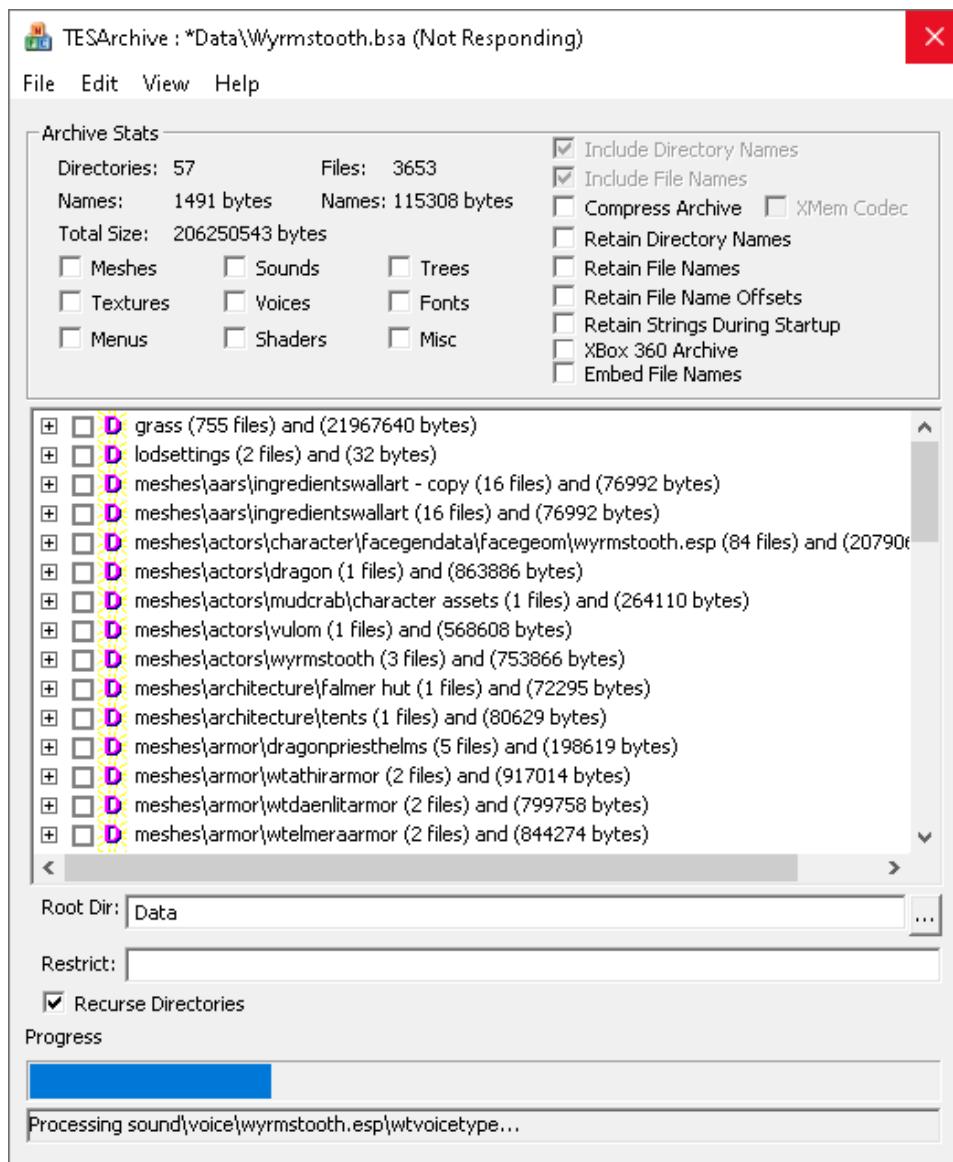


Figure 1553 - Packing the archive.

When it's done, your .bsa archive(s) should appear in the Skyrim Special Edition\Data folder.

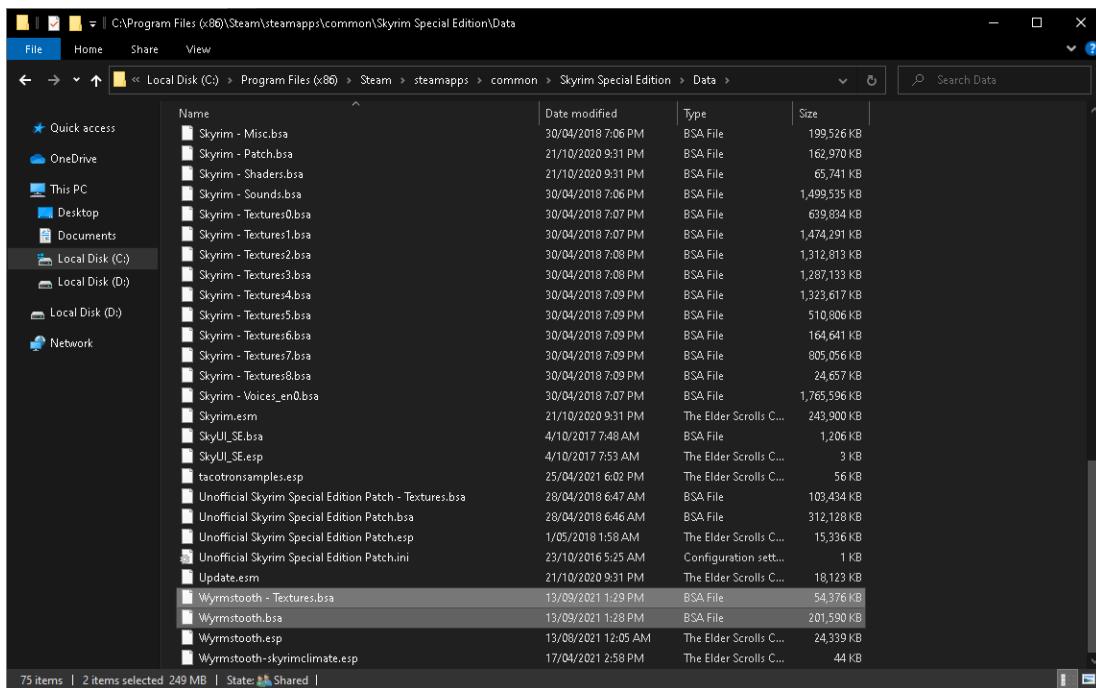


Figure 1554 - The .bsa archives are ready.

PACKAGING YOUR MOD FOR NINTENDO SWITCH

This section will cover packaging your mod using the [NX Toolkit](#) which is available on Nexusmods.

Download the NX Toolkit and extract it to a new folder.

Create a new folder in your projects directory and name it NX Port. Copy the .bsa archives and the .esp/.esm file from the SSE version of your mod into this folder.

If you created a .bik video, create a new folder called Video and copy the .bik video into it.

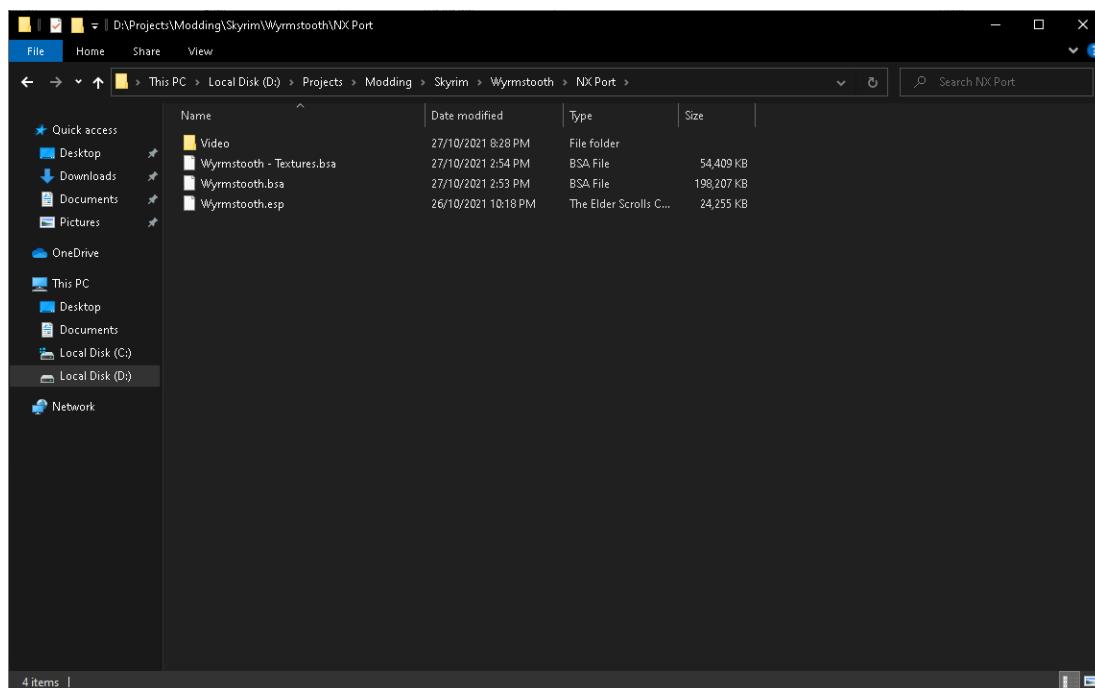
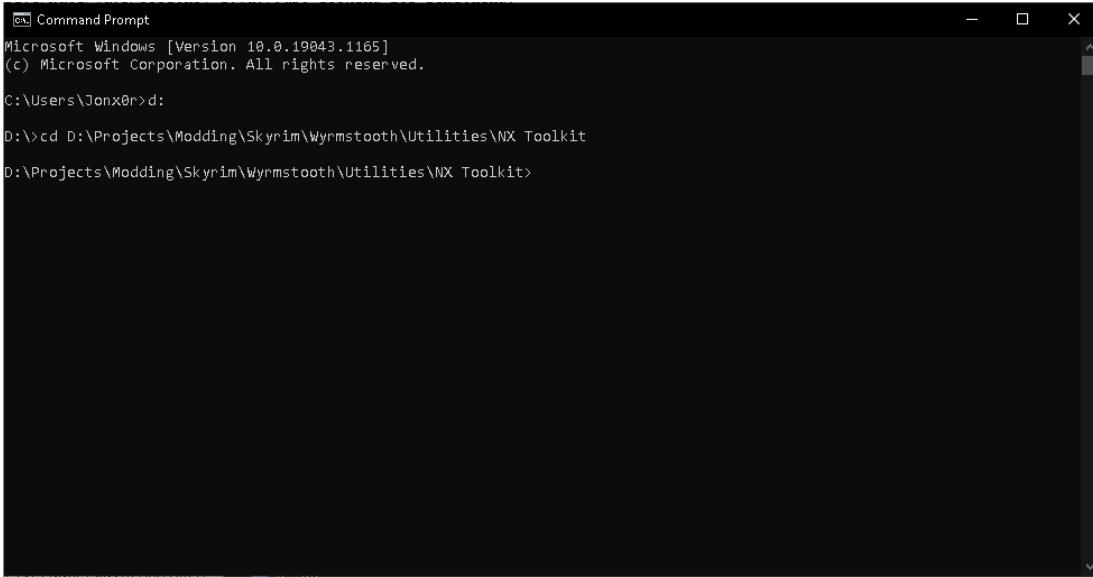


Figure 1555- NX Port folder.

Open a command prompt and navigate to the folder you extracted the NX Toolkit to.



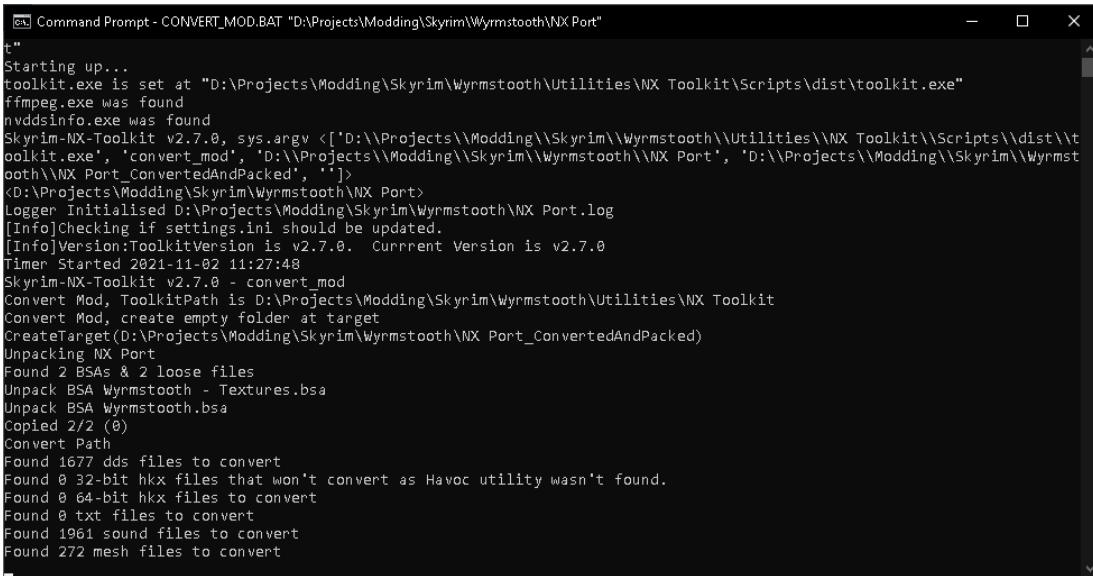
```
Command Prompt
Microsoft Windows [Version 10.0.19043.1165]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Jonx0r>d:
D:\>cd D:\Projects\Modding\Skyrim\WyrmsTooth\Utilities\NX Toolkit
D:\Projects\Modding\Skyrim\WyrmsTooth\Utilities\NX Toolkit>
```

Figure 1556 - Folder containing the NX Toolkit.

Run the following command: CONVERT_MOD.BAT "<PathToYourNXPortFolder>"

For example: CONVERT_MOD.BAT "D:\Projects\Modding\Skyrim\WyrmsTooth\NX Port"

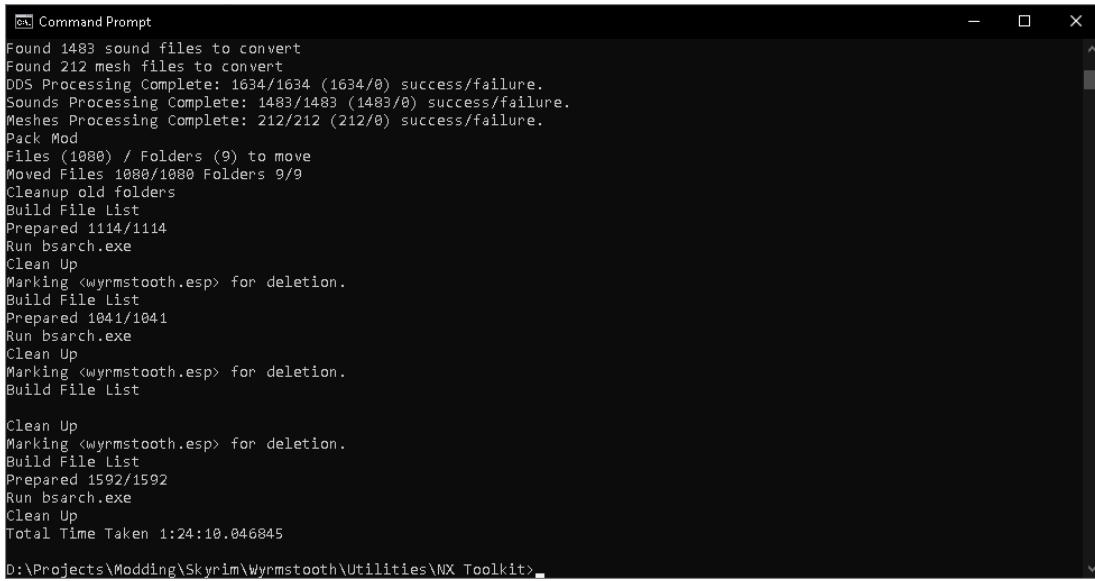


```
Command Prompt - CONVERT_MOD.BAT "D:\Projects\Modding\Skyrim\WyrmsTooth\NX Port"
t"
Starting up...
toolkit.exe is set at "D:\Projects\Modding\Skyrim\WyrmsTooth\Utilities\NX Toolkit\Scripts\dist\toolkit.exe"
ffmpeg.exe was found
nvdinfo.exe was found
Skyrim-NX-Toolkit v2.7.0, sys.argv <['D:\\Projects\\\\Modding\\\\Skyrim\\\\WyrmsTooth\\\\Utilities\\\\NX Toolkit\\\\Scripts\\\\dist\\\\toolkit.exe', 'convert_mod', 'D:\\Projects\\\\Modding\\\\Skyrim\\\\WyrmsTooth\\\\NX Port', 'D:\\Projects\\\\Modding\\\\Skyrim\\\\WyrmsTooth\\\\NX Port_ConvertedAndPacked', '']>
<D:\\Projects\\\\Modding\\\\Skyrim\\\\WyrmsTooth\\\\NX Port>
Logger Initialised D:\\Projects\\\\Modding\\\\Skyrim\\\\WyrmsTooth\\\\NX Port.log
[Info]Checking if settings.ini should be updated.
[Info]Version:ToolkitVersion is v2.7.0. Current Version is v2.7.0
[Info]Timer Started 2021-11-02 11:27:48
Skyrim-NX-Toolkit v2.7.0 - convert_mod
Convert Mod, ToolkitPath is D:\\Projects\\\\Modding\\\\Skyrim\\\\WyrmsTooth\\\\Utilities\\\\NX Toolkit
Convert Mod, create empty folder at target
CreateTarget(D:\\Projects\\\\Modding\\\\Skyrim\\\\WyrmsTooth\\\\NX Port_ConvertedAndPacked)
Unpacking NX Port
Found 2 BSAs & 2 loose files
Unpack BSA WyrmsTooth - Textures.bsa
Unpack BSA WyrmsTooth.bsa
Copied 2/2 (0)
Convert Path
Found 1677 dds files to convert
Found 0 32-bit hxx files that won't convert as Havoc utility wasn't found.
Found 0 64-bit hxx files to convert
Found 0 txt files to convert
Found 1961 sound files to convert
Found 272 mesh files to convert
```

Figure 1557 - Starting up the conversion process.

The converted files for you to distribute will appear under a folder called 'NX Port_ConvertedAndPacked'.

This process may take a while to complete. Just let it run until it's finished.



```

Command Prompt
Found 1483 sound files to convert
Found 212 mesh files to convert
DDS Processing Complete: 1634/1634 (1634/0) success/failure.
Sounds Processing Complete: 1483/1483 (1483/0) success/failure.
Meshes Processing Complete: 212/212 (212/0) success/failure.
Pack Mod
Files (1080) / Folders (9) to move
Moved Files 1080/1080 Folders 9/9
Cleanup old folders
Build File List
Prepared 1114/1114
Run bsarch.exe
Clean Up
Marking <WyrmsTooth.esp> for deletion.
Build File List
Prepared 1041/1041
Run bsarch.exe
Clean Up
Marking <WyrmsTooth.esp> for deletion.
Build File List

Clean Up
Marking <WyrmsTooth.esp> for deletion.
Build File List
Prepared 1592/1592
Run bsarch.exe
Clean Up
Total Time Taken 1:24:10.046845

D:\Projects\Modding\Skyrim\WyrmsTooth\Utilities\NX Toolkit>

```

Figure 1558 - Conversion complete.

The NX Port_ConvertedAndPacked folder should contain new .bsa archives and your .esp/.esm file ready for upload.

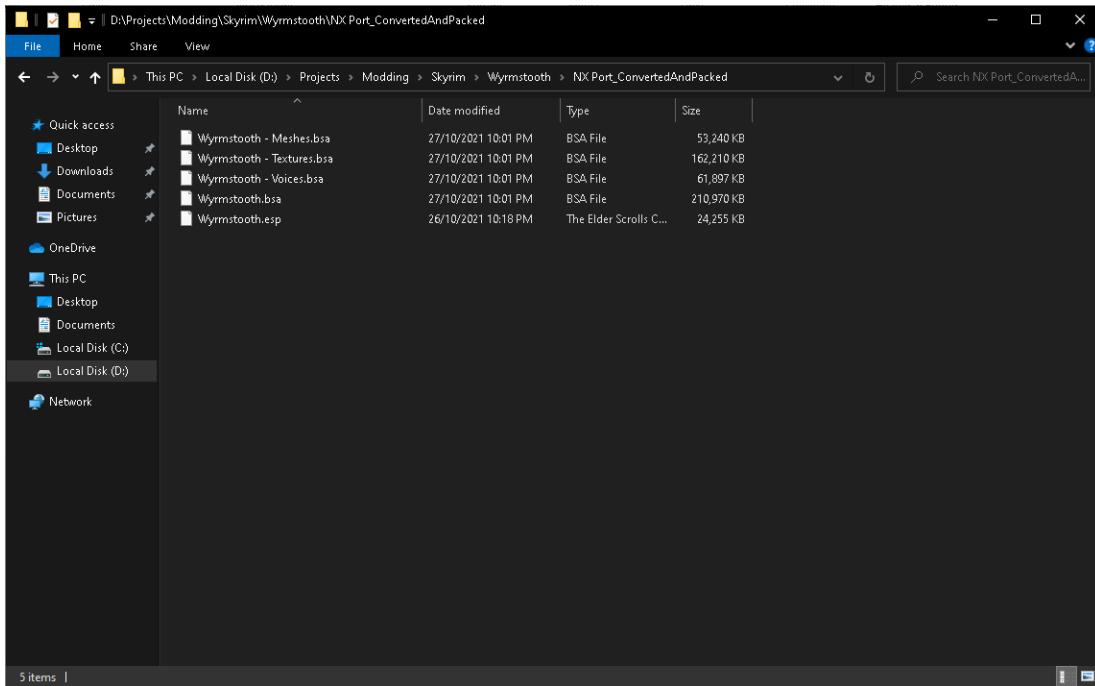


Figure 1559 - Converted and packed for switch.

If you need to port your mod from Legendary Edition first, see the section on [Porting your mod to Skyrim Special Edition](#).

