

CHAPTER 2: MARKERS

ADDING IDLE MARKERS

We can use idle markers to influence an NPC's idle behavior. Typically they're used to set up patrol points or to make NPCs play idle animations at specific spots.

A list of idle markers can be found in the Object Window under Miscellaneous > IdleMarker.

Note: NPCs can use idle markers in two different ways; by being linked to one directly, or through a package.

For example, NPCs with a sandbox package will randomly choose nearby furniture and idle markers to interact with. If we place a BrowseIdleMarker marker in front of a shelf, an NPC that is sandboxing in that cell will eventually walk over to the idle marker, face the direction it's pointing, and play the IdleExamine and IdleStudy animations that are assigned to that specific idle marker.



Figure 302 - An example of a BrowseIdleMarker marker placed in an interior cell.

Most idle markers are shown in the render window as a blue square with an 'I' and an arrow pointing in the direction that the marker is facing, though some may have a custom marker model indicating how an actor will be positioned when using it.

Here's an example of some more idle markers placed in an interior cell.



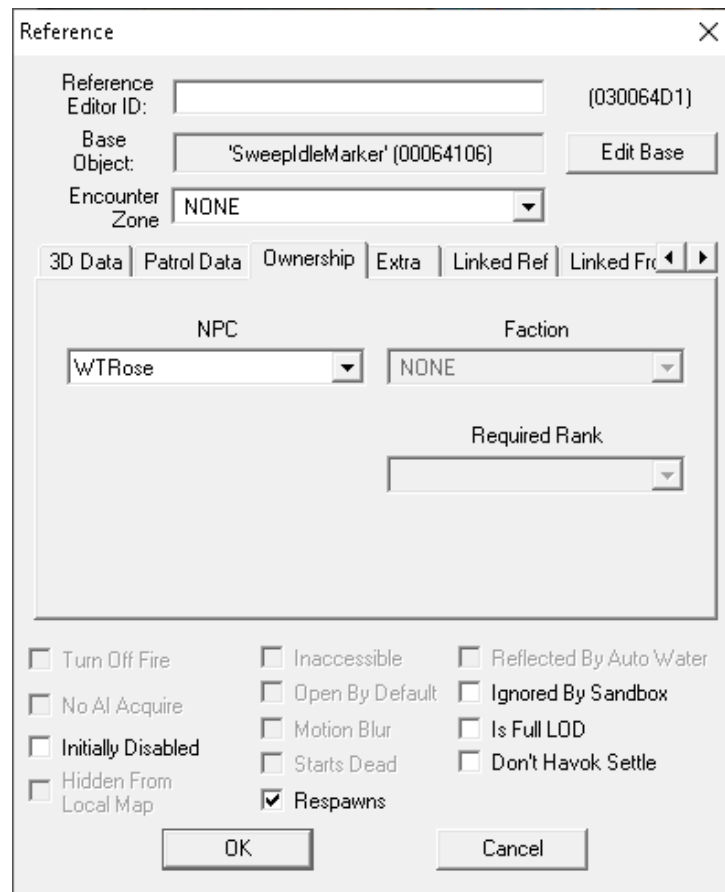
Figure 303 - More idle markers in an interior cell.

This scene contains a mix of WarmHandsIdleMarker to play the IdleWarmHands and idle_A_leg_shift animations, and SweepIdleMarker to play the idleLooseSweepingStart animation.

By default, idle markers can be used by anyone. But you can add NPC or faction ownership to them to ensure they can't be used by anyone else.

Double-click or right-click on an idle marker in the render window and select Edit.

Go to the Ownership tab.



The screenshot shows the 'Reference' dialog box with the 'Ownership' tab selected. The 'Reference Editor ID' is (030064D1). The 'Base Object' is 'SweepIdleMarker' (00064106) with an 'Edit Base' button. The 'Encounter Zone' is set to 'NONE'. The 'Ownership' tab is active, showing 'NPC' as 'WTRose' and 'Faction' as 'NONE'. There is a 'Required Rank' dropdown menu. At the bottom, there are several checkboxes: 'Turn Off Fire', 'No AI Acquire', 'Initially Disabled', 'Hidden From Local Map', 'Inaccessible', 'Open By Default', 'Motion Blur', 'Starts Dead', 'Respawns' (checked), 'Reflected By Auto Water', 'Ignored By Sandbox', 'Is Full LOD', and 'Don't Havok Settle'. 'OK' and 'Cancel' buttons are at the bottom.

Figure 304 - Setting ownership on an idle marker.

In the screenshot above, only a specific NPC can use this particular SweepIdleMarker.

Click OK to close the reference properties.

Let's say we spawned in a bandit and wanted the bandit to patrol between several different spots. We can do this by linking two `PatrolIdleMarker` markers together then linking the bandit to one of them.

In the screenshot below, I've placed an `LvlBanditMelee1H` and two `PatrolIdleMarker` markers for the bandit to travel back and forth between.



Figure 305 - An `LvlBanditMelee1H` spawner and two `PatrolIdleMarker` markers.

First we need to link the two `PatrolIdleMarker` markers together.

Double-click or right-click on one of the `PatrolIdleMarker` markers and select Edit.

Navigate to the Linked Ref tab, right-click in the References list and select New.

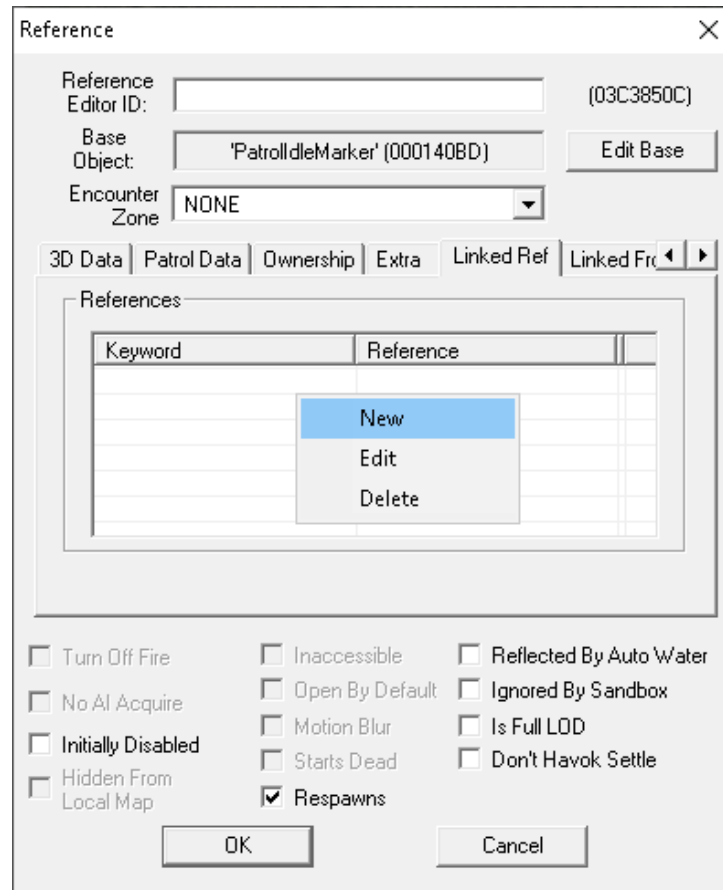


Figure 306 - Adding a new linked ref.

Click on 'Select Reference in Render Window'

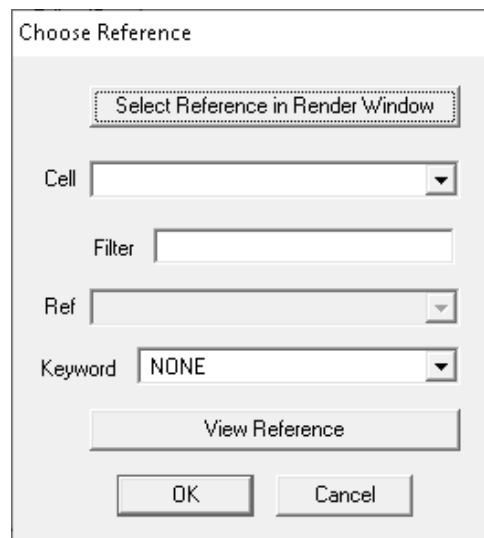


Figure 307 - Selecting the other PatrolIdleMarker marker from the render window.

This will bring up the render window and your mouse cursor will change to a crosshair. Use it to select the other PatrolIdleMarker marker by double-clicking on it.

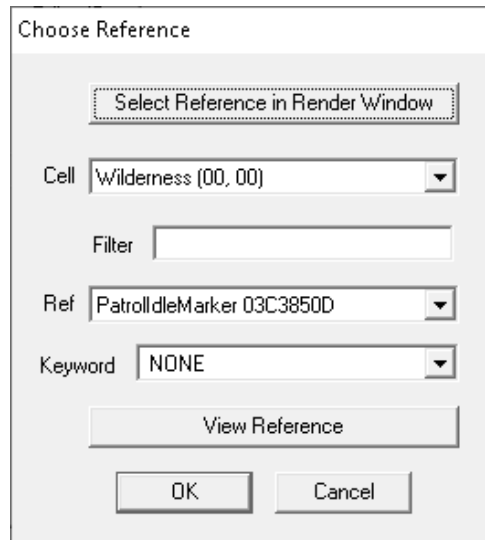


Figure 308 - Selected the other PatrolIdleMarker marker.

Click OK.

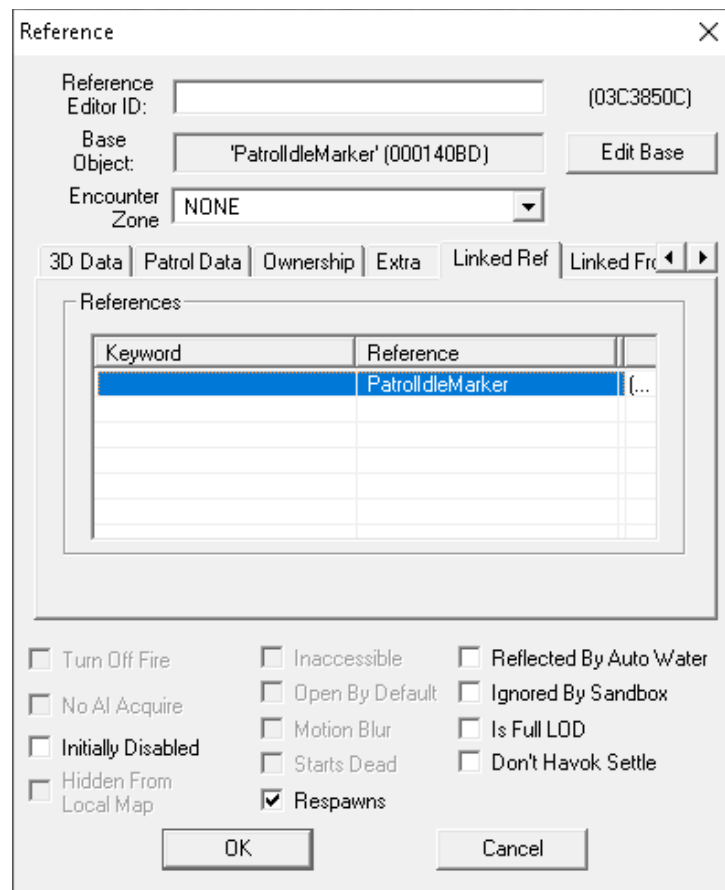


Figure 309 - The two PatrolIdleMarker markers are now linked together.

Click OK to close out of the Reference properties.



Figure 310 - Arrow showing two linked references.

In the render window you should now see an arrow from the first PatrolIdleMarker marker pointing to the marker it was linked to.

Now we need to add the bandit to these patrol points.

Double-click or right-click on the bandit spawner and select Edit.

Go to the Linked Ref tab, right-click in the References list and select New.

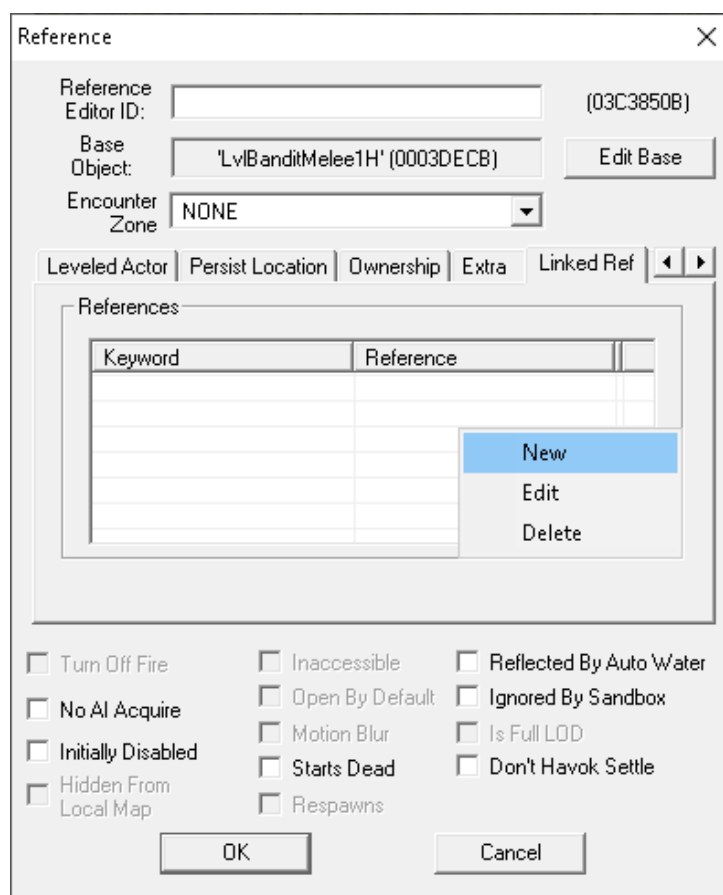


Figure 311 - Adding a new linked reference.

Click on 'Select Reference in Render Window' and select one of the PatrolIdleMarker markers then click OK.

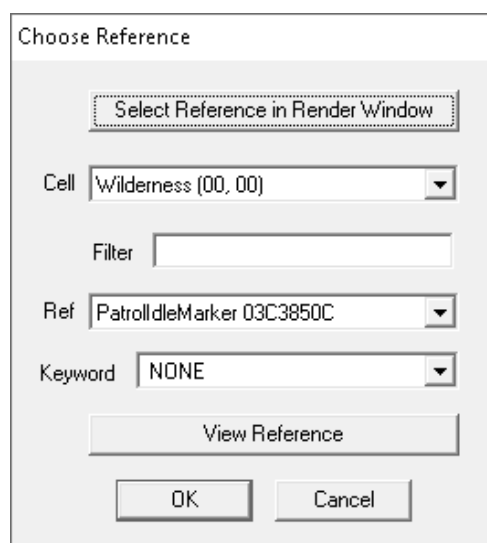


Figure 312 - Linking the bandit spawner to one of the PatrolIdleMarker markers.

Confirm the PatrolIdleMarker marker is listed in the References list then click OK to close out of Reference properties.

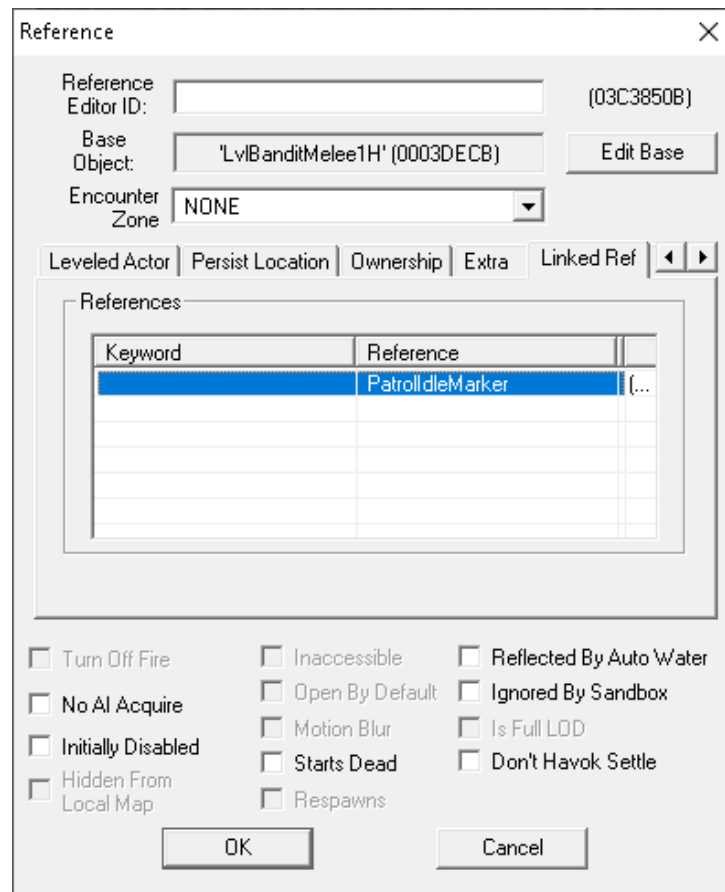


Figure 313 - LvlBanditMelee1H is now linked to a PatrolIdleMarker marker.

You should now see an arrow pointing to the PatrolIdleMarker marker that the bandit was linked to.



Figure 314 - Our bandit now has patrol points.

Right now, our bandit will walk back and forth between these two points without stopping.

We can control how much time the bandit spends at a particular patrol point by adding some idle time.

Double-click or right-click on one of the PatrolIdleMarker markers and select Edit.

Go to the Patrol Data tab.

Let's say we want the bandit to stand here for 5 seconds before moving on. Tick 'Patrol Data' and set the Idle Time to 5.0000.

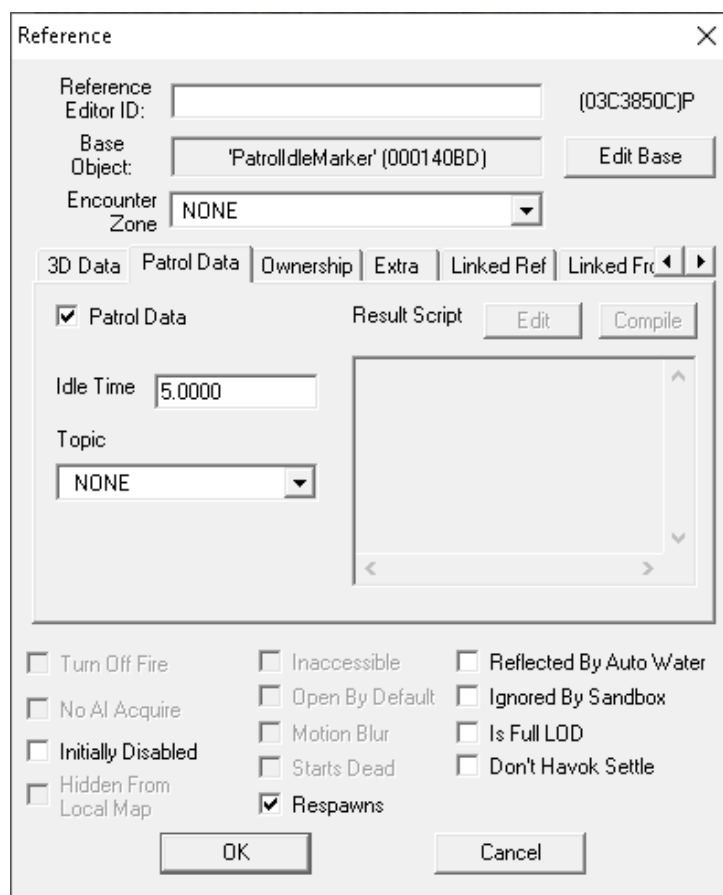


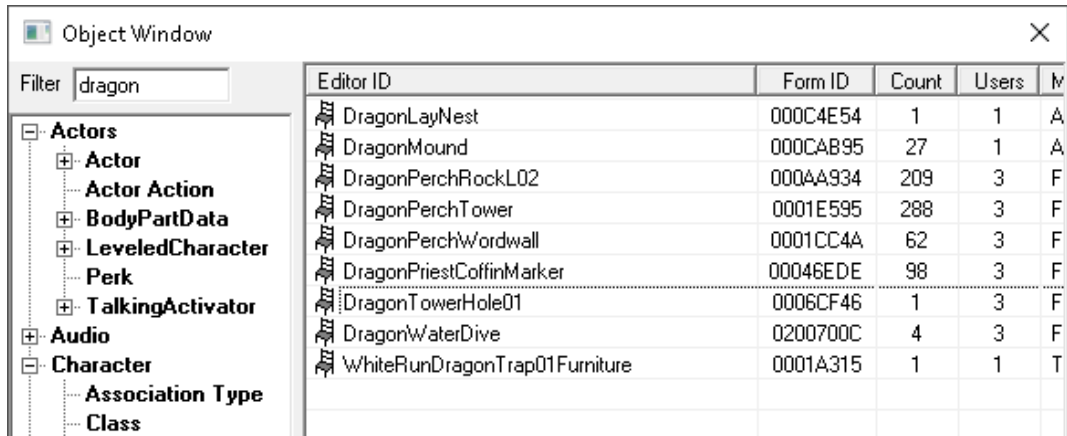
Figure 315 - Adding some idle time to this patrol point.

Click OK to close out of the Reference properties.

Repeat these steps for the other PatrolIdleMarker marker if you want to.

While technically defined as furniture, DragonPerchWordwall, DragonPerchTower and DragonPerchRockL02 can be used to let dragons land on objects.

You'll find them under WorldObjects > Furniture. Just filter by 'dragon'.



The screenshot shows the 'Object Window' with a filter set to 'dragon'. The left pane shows a tree view of object categories, with 'Actors' expanded. The right pane displays a table of objects.

Editor ID	Form ID	Count	Users	W
DragonLayNest	000C4E54	1	1	A
DragonMound	000CAB95	27	1	A
DragonPerchRockL02	000AA934	209	3	F
DragonPerchTower	0001E595	288	3	F
DragonPerchWordwall	0001CC4A	62	3	F
DragonPriestCoffinMarker	00046EDE	98	3	F
DragonTowerHole01	0006CF46	1	3	F
DragonWaterDive	0200700C	4	3	F
WhiteRunDragonTrap01Furniture	0001A315	1	1	T

Figure 316 - A list of dragon markers.

In the screenshot below, I added DragonPerchTower to the roofs of houses to let dragons land there.

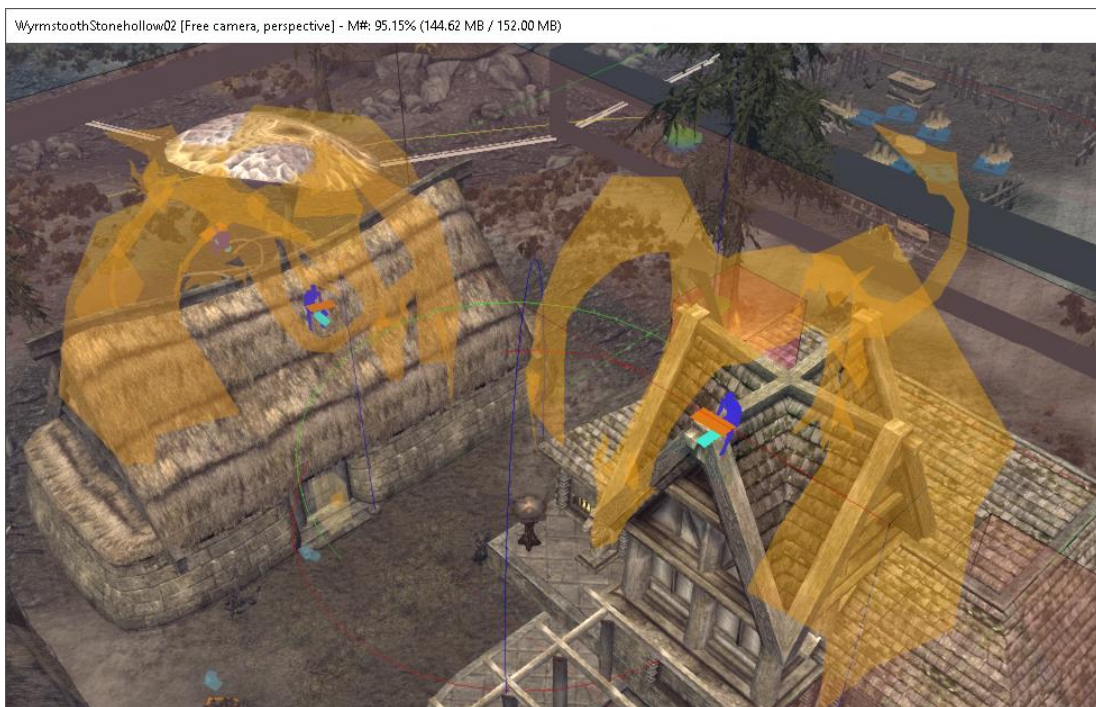


Figure 317 - DragonPerchTower added to the roofs of houses.

The screenshot below shows an example of DragonPerchRockL02 in an exterior cell.

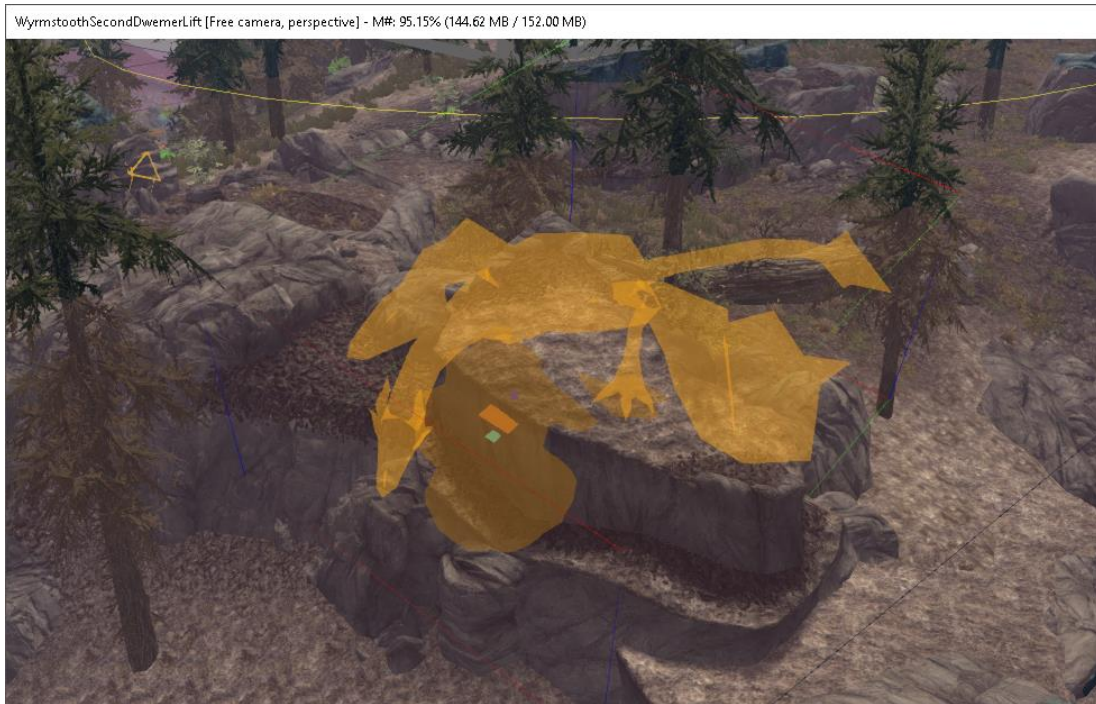


Figure 318 - An example of DragonPerchRockL02 added to an exterior cell.

When placing dragon markers, it's important to be mindful of where the dragon's feet are going to be positioned when a dragon uses the marker. You'll want to avoid sinking the marker too far into the surface of an object below it so dragons don't clip through.

You can also find a few more idle markers listed under Furniture. For example, the screenshot below shows `SoldierWallIdle`. This marker can be placed against walls, wherever you want NPCs to stand in place against a wall with their arms folded.

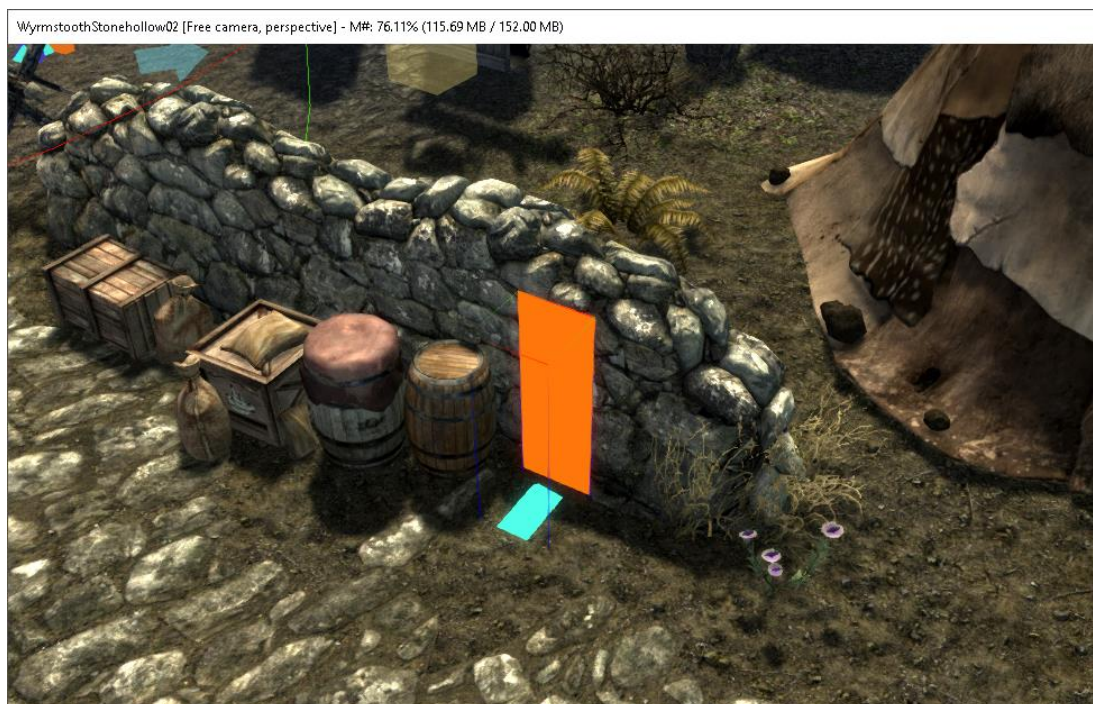


Figure 319 - SoldierWallIdle marker.

`RailLeanMarker` will make NPCs lean on a railing in front of them. Use the orange box to gauge where the NPC's hands will go when they use this marker.



Figure 320 - RailLeanMarker.

The three markers selected in the render window in the screenshot below are Wounded01FloorMarker, Wounded02FloorMarker and Wounded03FloorMarker.

They can be used to have an NPC lay on the ground and act wounded.

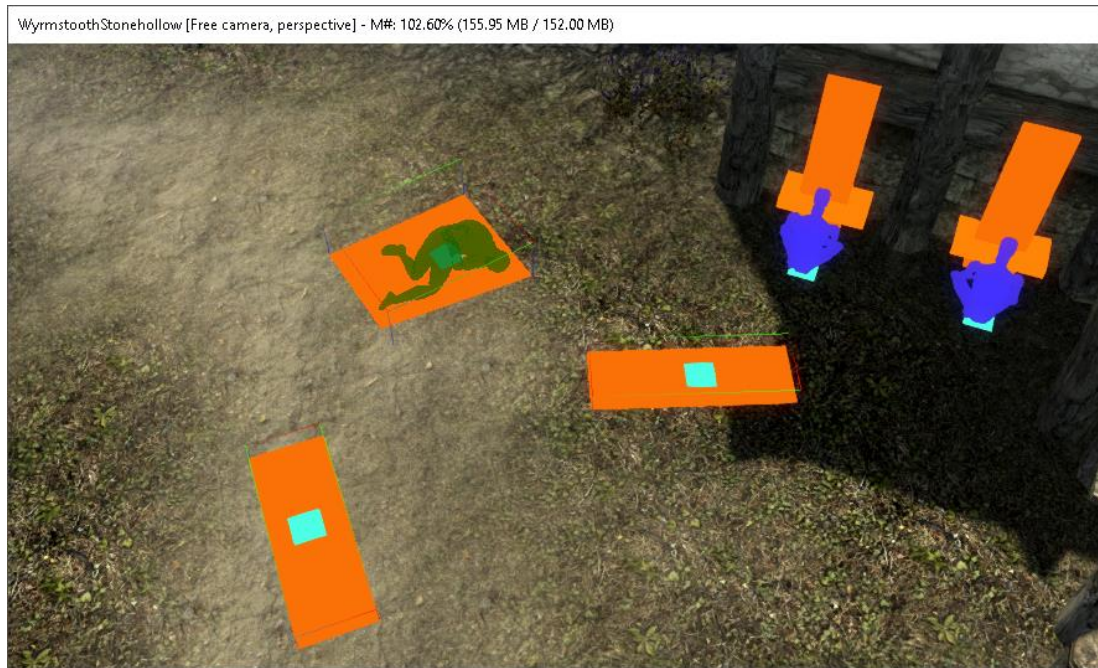


Figure 321 - Wounded markers.

At the top right we can also see a HammerWallMarker which makes NPCs play a wall hammering animation.

Animals can also use idle markers. Here's an example of `DogLayingDownIdleMarker` which can be used to make dogs lay down at a specific spot.



Figure 322 - DogLayingDownIdleMarker.

Another common one you'll see in dungeons is `CreatureAlcoveMarker`. Draugr can be linked to this marker to make them stand still in an alcove to ambush the player.

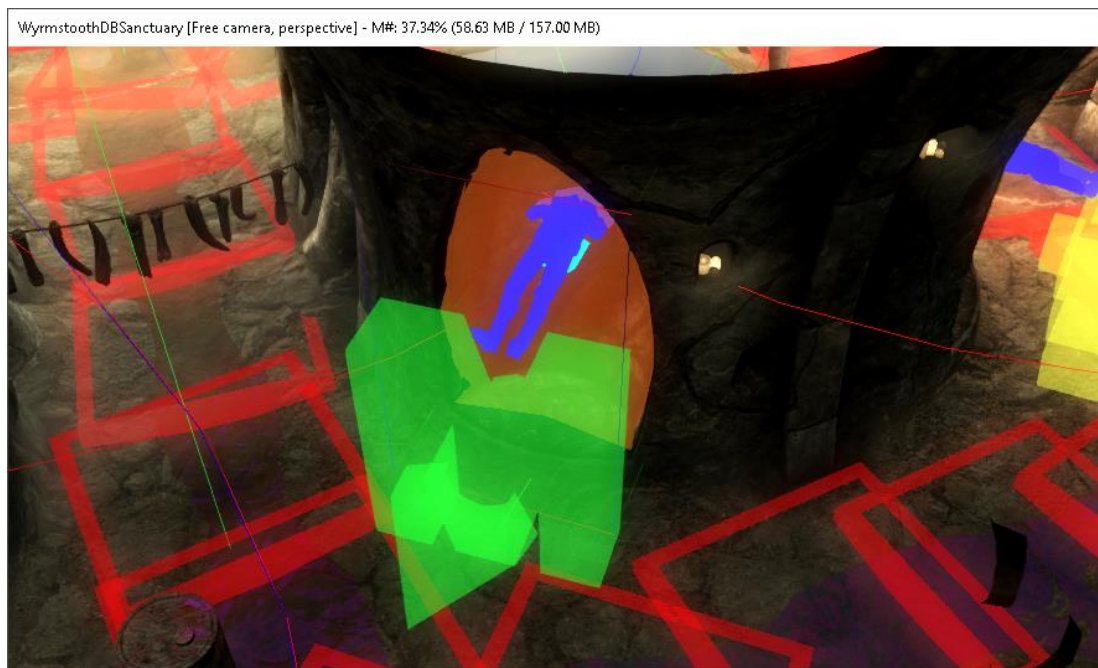


Figure 323 - CreatureAlcoveMarker.

An alternative to CreatureAlcoveMarker is CreatureAlcoveBgMarker which makes draugr lay down on a flat surface instead.

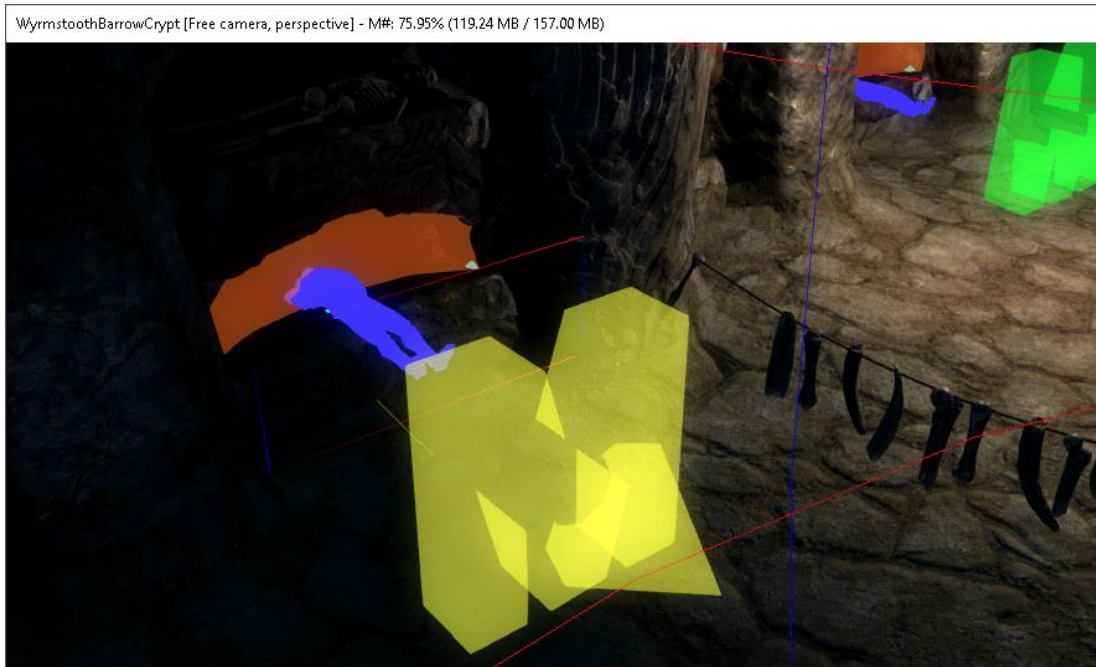


Figure 324 - CreatureAlcoveBgMarker.

For more furniture markers, just filter the Object Window by 'marker' or 'idle'.

CREATING A CUSTOM IDLE MARKER

Let's say we wanted to make an NPC play a specific animation that's not defined in one of the existing markers. We'll need to create our own.

In the Object Window, go to Miscellaneous > IdleMarker.

Right-click on an existing marker and select New.

Set an ID for this marker. In the example below, I just called it CiceroDanceMarker and added the 'WT' prefix.

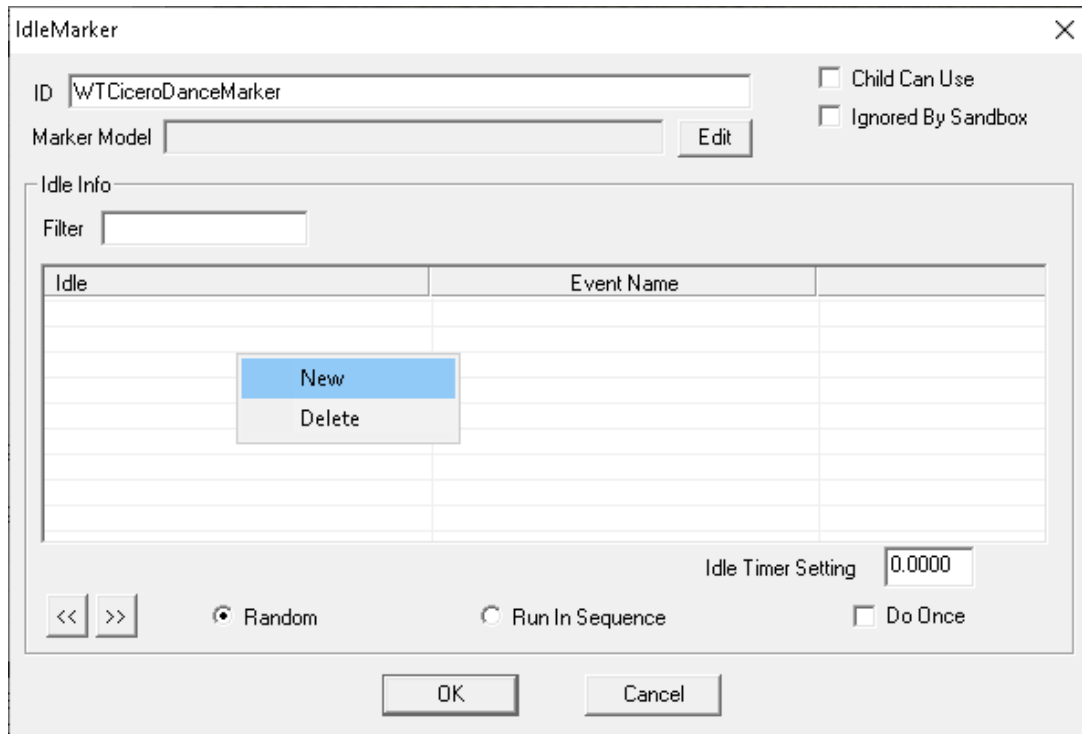


Figure 325 - Created a new idle marker.

Right-click in the Idle Info list and select New.

Search for the idle animation you want an NPC using this marker to play. For my example I'm going to add IdleCiceroDance1. To add an idle animation, double-click on it.

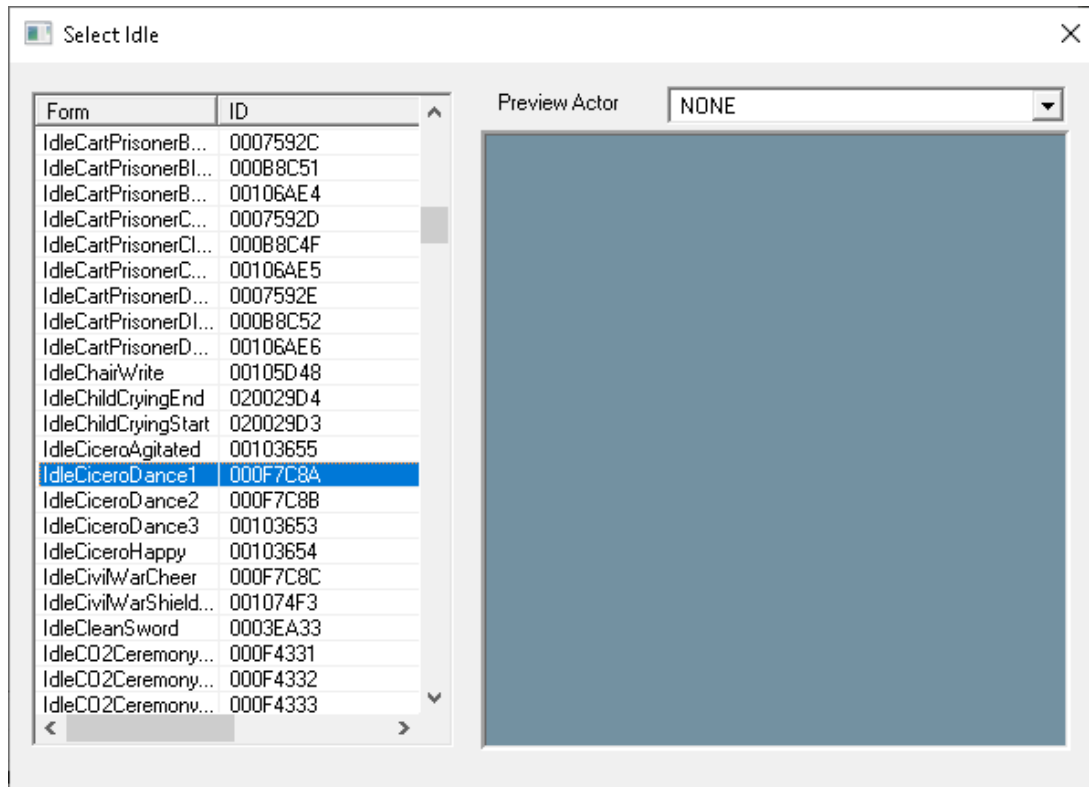


Figure 326 - Adding IdleCiceroDance1 to our new idle marker.

Confirm the idle animation has been added.

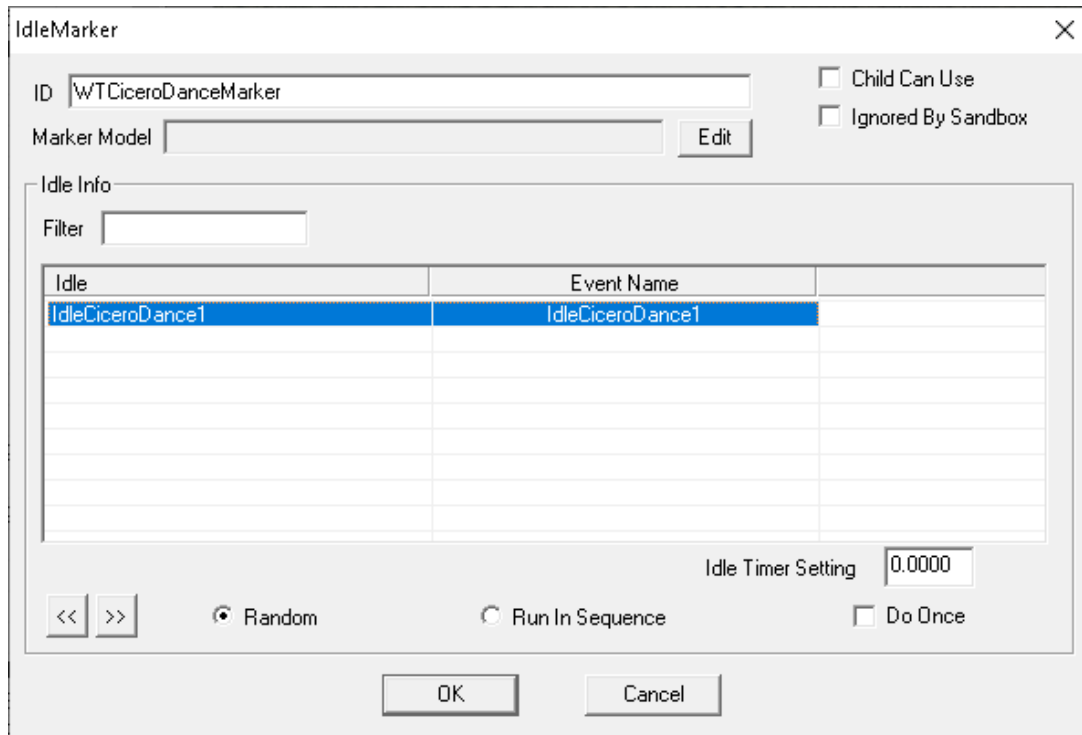


Figure 327 - New animation added to our new idle marker.

I also added IdleCiceroDance2 and IdleCiceroDance3 by repeating those steps.

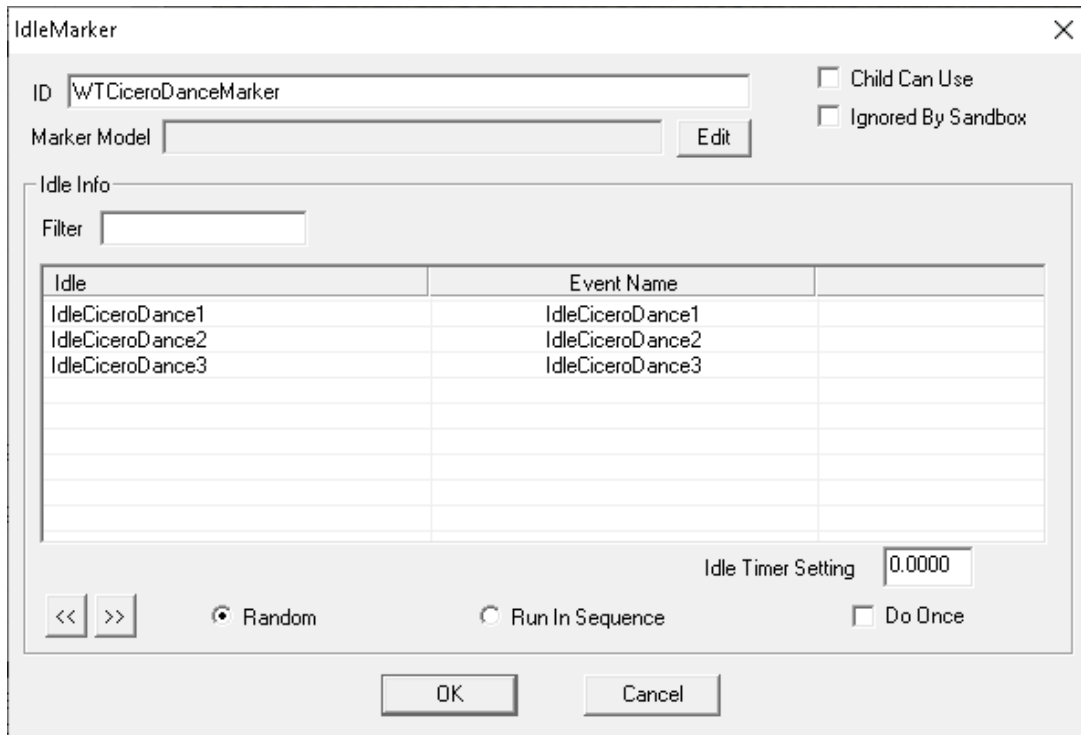


Figure 328 - Added a couple more animations to our new idle marker.

Click OK to close out of the IdleMarker properties.

We can now place our idle marker in the world.

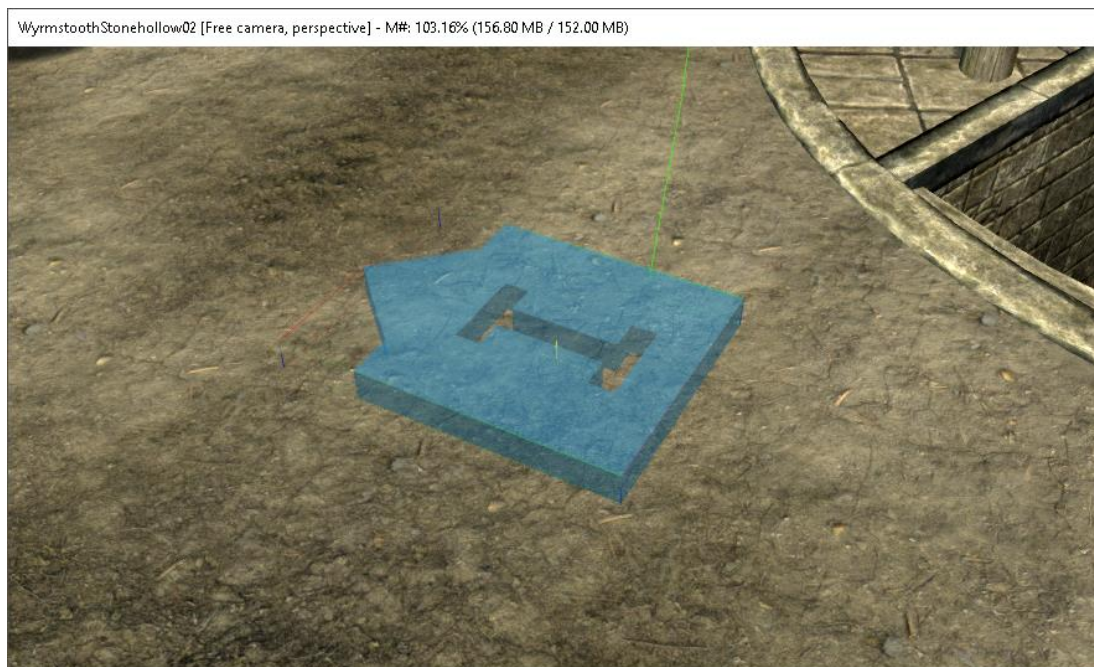


Figure 329 - Custom idle marker placed in our world space.

ADDING MAP MARKERS

Map markers mark specific locations on the world map.

In the Object Window, go to WorldObjects > Static. Filter by 'mapmarker'.

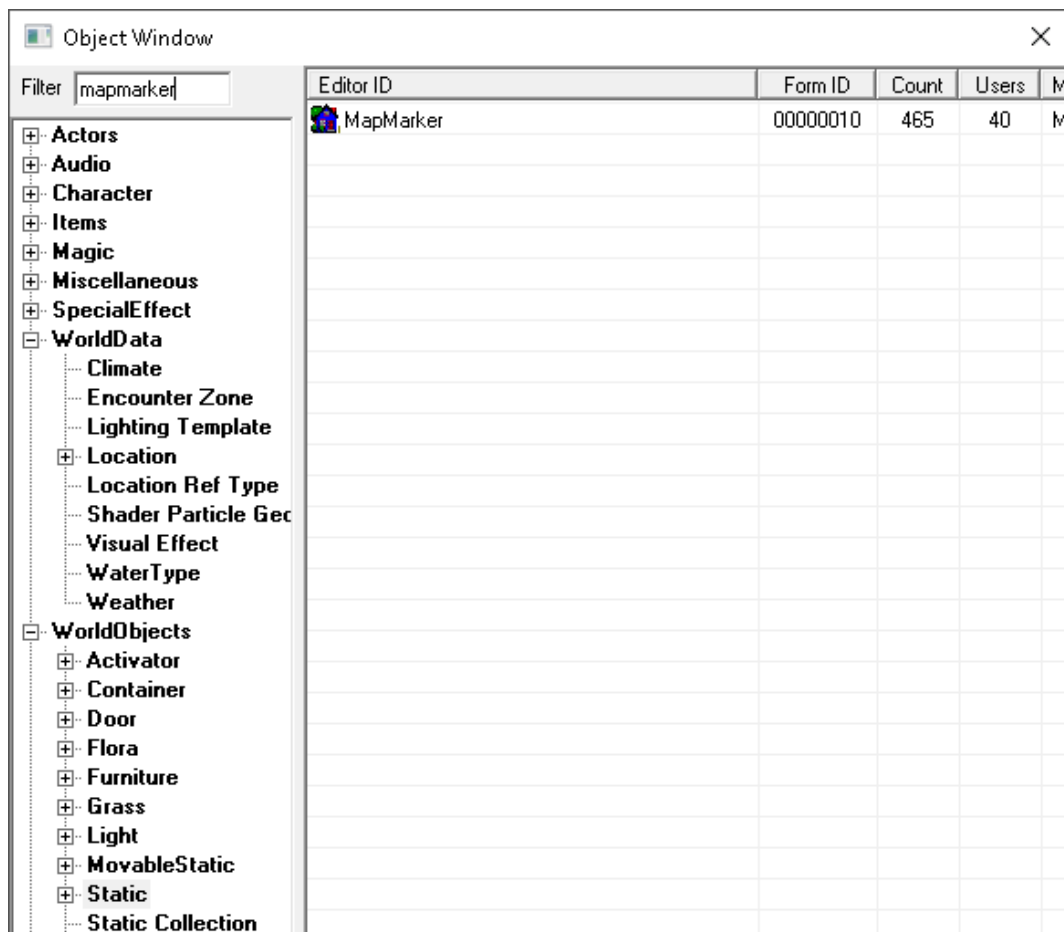


Figure 330 - Adding a map marker.

Drag and drop the MapMarker object into the render window at a spot that's central to your location.

The map marker will appear as a green square with an 'M' in it.



Figure 331 - The M map marker added to a location.

Double-click or right-click on the map marker and select Edit.

Go to the Marker Data tab.

The Name field specifies the name of the location that players will see on the map screen and when approaching the location for the first time.

The screenshot shows the 'Reference' dialog box with the 'Marker Data' tab selected. The 'Reference Editor ID' is '(03002837)P'. The 'Base Object' is 'MapMarker' (00000010) with an 'Edit Base' button. The 'Encounter Zone' is set to 'NONE'. The 'Marker Data' section is checked and contains a 'Name' field with 'Stonehollow' and a 'Type' dropdown set to 'Settlement'. Below this are three checkboxes: 'Visible', 'Can Travel To', and '"Show All" hidden', all of which are currently unchecked. At the bottom, there are several other checkboxes: 'Turn Off Fire', 'No AI Acquire', 'Initially Disabled', 'Hidden From Local Map', 'Inaccessible', 'Open By Default', 'Motion Blur', 'Starts Dead', 'Resawns' (checked), 'Reflected By Auto Water', 'Ignored By Sandbox', 'Is Full LOD', and 'Don't Havok Settle'. 'OK' and 'Cancel' buttons are at the bottom right.

Figure 332 - Map marker data.

The Type determines the map marker icon that'll appear on the world map and on the player's compass.

Ticking Visible will make the marker appear in your map screen as soon as the game loads without needing to travel to it. If you tick Can Travel To you'll be able to fast travel to this location immediately assuming Visible is also ticked.

Go to the Extra tab.

The Radius field determines how far away from the map marker the player needs to be before they'll see the '<Location Name> discovered' message.

The screenshot shows the 'Reference' dialog box with the 'Extra' tab selected. The 'Radius' field is set to 5000.00. Other fields include 'Reference Editor ID' (03002837)P, 'Base Object' ('MapMarker' (00000010)), 'Encounter Zone' (NONE), 'Count' (Default), 'Health %' (Default), 'Charge' (Default), 'Time left' (Default), 'Alpha cutoff' (Default), 'Radiation' (Default), 'Head-tracking weight' (1.0000), 'Favor Cost' (0.0000), 'Horse' (Choose Horse), 'Soul' (Default), and 'Sky Marker' (unchecked). A list of checkboxes at the bottom includes 'Turn Off Fire', 'No AI Acquire', 'Initially Disabled', 'Hidden From Local Map', 'Inaccessible', 'Open By Default', 'Motion Blur', 'Starts Dead', 'Resawns' (checked), 'Reflected By Auto Water', 'Ignored By Sandbox', 'Is Full LOD', and 'Don't Havok Settle'.

Figure 333 - Setting the map marker radius.

I increased this value to 5000.00 so players see the message as they pass through the town gate which is about 5000 units away from the map marker.

Under the Location Ref Type tab we can set the Location Reference Type to MapMarkerRefType.

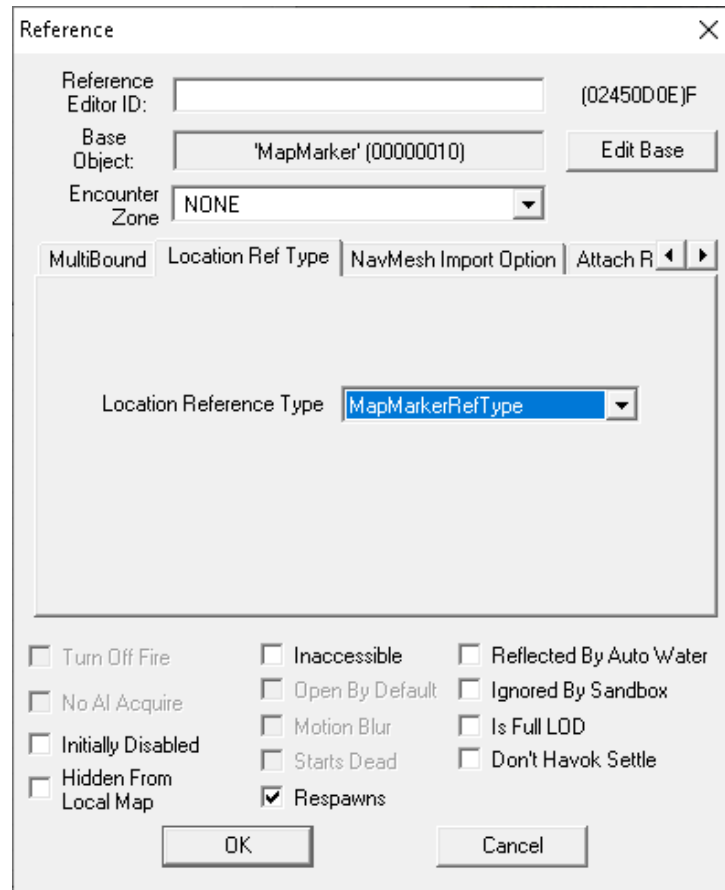


Figure 334 - MapMarkerRefType.

I'll be covering [Common Radiant Markers](#) shortly, but setting this may allow certain radiant side quests to use the location containing this map marker, depending on the types of keywords assigned to the location. Specifically Jarl bounty side quests such as Kill the Giant or Kill the Bandit Leader.

Click OK to close out of the map marker reference properties.

The map marker radius can be seen in the render window as a yellow circle.



Figure 335 - Map marker radius.

ADDING COMMON RADIANT MARKERS

Radiant markers are used by the radiant quest system to mark where quest objects or quest-related NPCs may be dynamically placed.

In this section I'm going to go over the most commonly used markers, how they're used and where they should be placed.

For setting up these markers we'll mostly be using XMarker and XMarkerHeading.

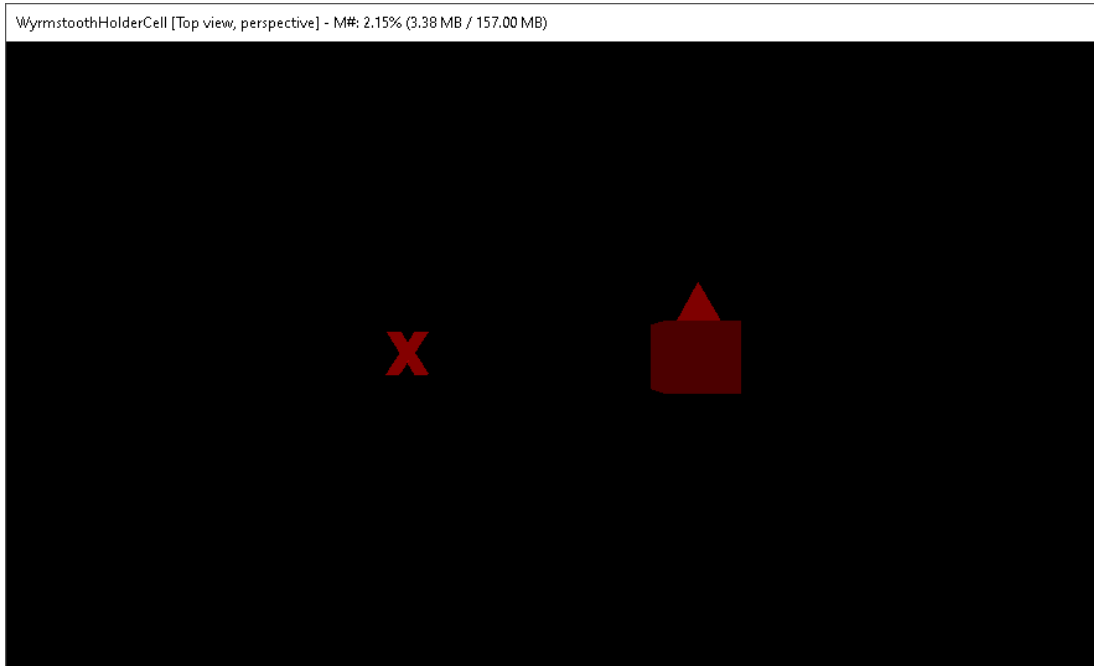
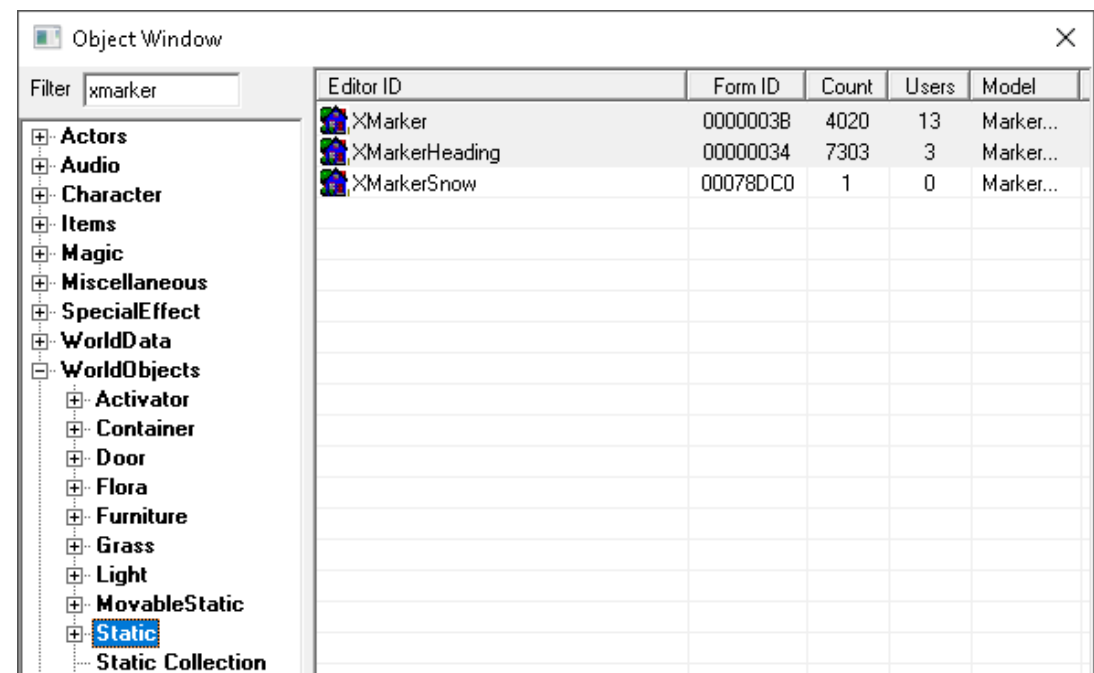


Figure 336 - XMarker and XMarkerHeading.

They're basically interchangeable, however XMarkerHeading is usually used when an object or NPC needs to be placed facing a specific direction, hence the arrow.



To set an XMarker as a specific type of radiant marker, double-click or right click on it and select Edit, then go to the Location Ref Type tab.

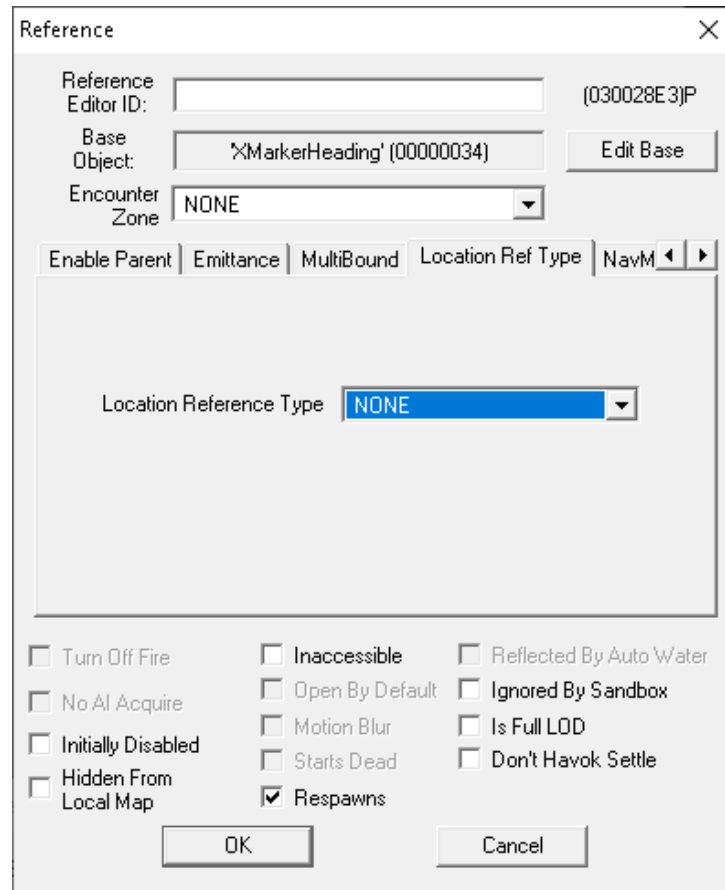


Figure 338 - Location Ref Type tab.

Set the radiant marker type by selecting it in the Location Reference Type drop-down.

All radiant markers belonging to a specific location can be found under the Location Ref Types tab in the location's properties.

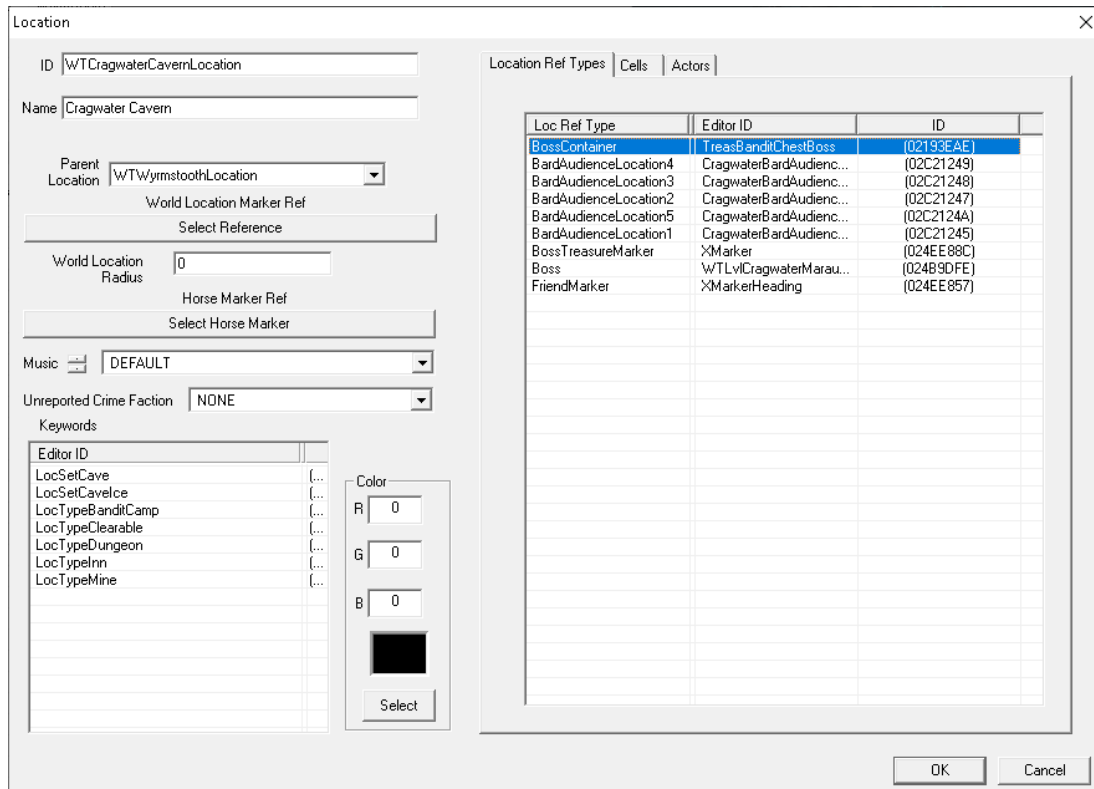


Figure 339 - Location Ref Types tab in Location properties.

LocationCenterMarker is generally used to mark the centre point of a location. Some quest packages (e.g.: random encounters) may make an NPC sandbox around this marker, or may spawn NPCs at this marker to wait for the player (e.g.: the courier).



Figure 340 - LocationCenterMarker.

BossTreasureMarker is placed on an XMarker. It's generally used by radiant quests to mark the location of a quest item in your journal.

It's usually paired with BossContainer which is assigned to a treasure chest as per the screenshot below. This is the container that a quest item may be spawned into.



Figure 341 - BossTreasureMarker and BossContainer.

Boss is added to an actor that needs to be killed before a location can be considered cleared. A location can have multiple actors flagged as Boss, meaning they all need to be killed before a location is cleared.

Important: The location needs to have the **LocTypeClearable** keyword assigned to it.

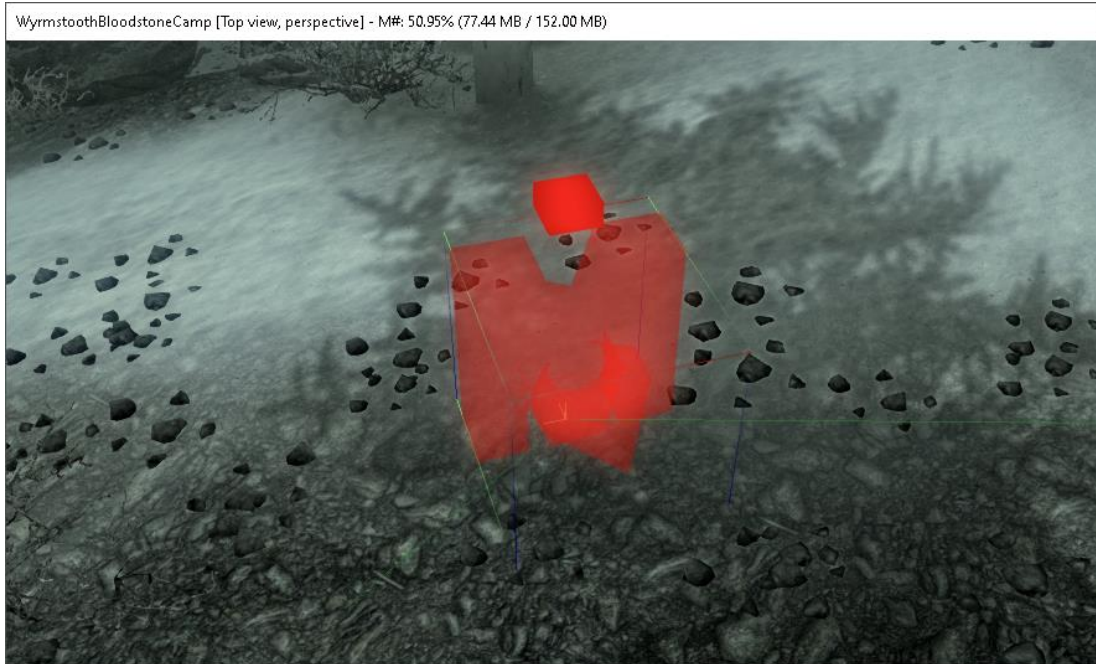


Figure 342 - Boss.

Important: Boss should only be assigned to actors.

BardAudienceLocation1, BardAudienceLocation2, BardAudienceLocation3, BardAudienceLocation4 and BardAudienceLocation5 are used to mark 5 spots where NPCs may stand when a bard begins performing.

Important: The location a bard performs at needs to have the **LocTypeInn** keyword assigned to it otherwise the performance will fail.

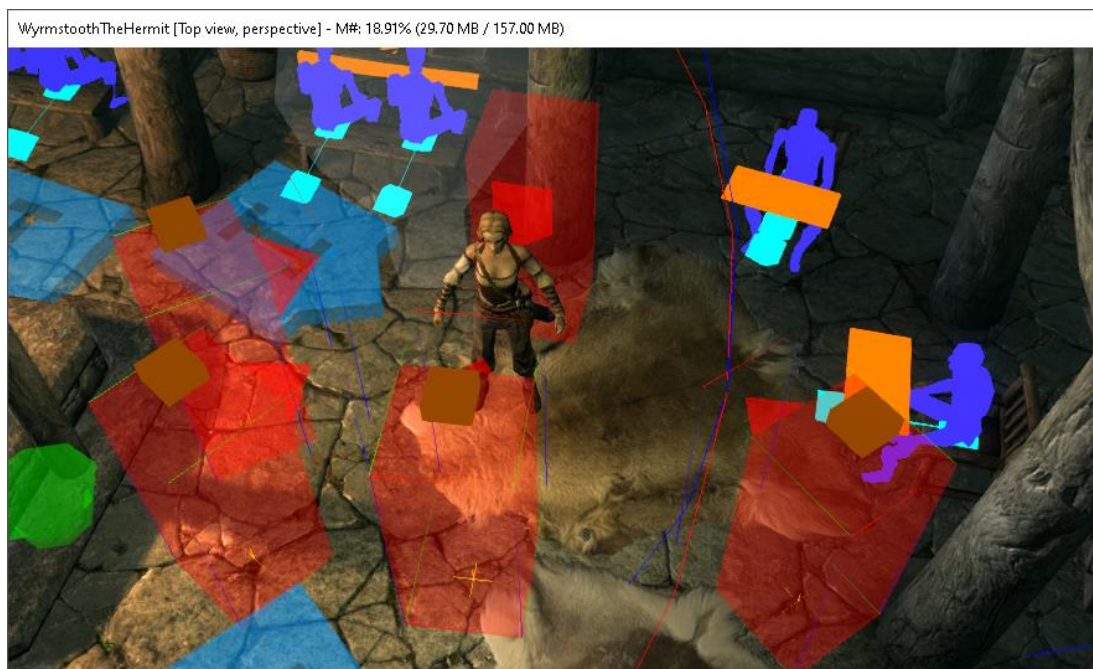


Figure 343 - BardAudienceLocation.

CaptiveMarker is used by the Companions Rescue Mission side quests. It marks the spot where an NPC is being held captive, typically in some sort of a jail cell. The NPC will stand at this spot until interacted with by the player.



Figure 344 - CaptiveMarker.

FriendMarker is used by radiant quests involving NPCs that need to wait for the player at a specific location.

Generally they're placed at a safe spot, such as near the entrance to a dungeon or a camp situation away from enemy patrols.



Figure 345 - FriendMarker.

OutsideEntranceMarker is typically placed at dungeons near the door marker in the world space cell.

NPCs that need to wait outside the entrance to a dungeon may use this marker.

This marker is also used as the spot to spawn dragons at when the next dragon event is scheduled to occur. The more you know.



Figure 346 - OutsideEntranceMarker.

Similarly, `InsideEntranceMarker` is typically placed in an interior cell near the door marker leading outside.

NPCs that need to wait inside the entrance to a dungeon may use this marker.



Figure 347 - InsideEntranceMarker.

TGRWealthMarker01, TGRWealthMarker02 and TGRWealthMarker03 are used to spawn items for the player to steal during the Thieves Guild The Sweep Job side quests.

Typically they're placed on shelves or on tables where there's enough room for a goblet or vase to be placed.

Important: Locations marked by the Thieves Guild should have the **TGWealthyHome** keyword.



Figure 348 - TGRWealthMarker.

TGRWealthyHomeChest is used by Thieves Guild side quests to spawn items for the player to steal.

Important: Locations marked by the Thieves Guild should have the **TGWealthyHome** keyword. Also, you should only flag containers with TGRWealthyHomeChest.

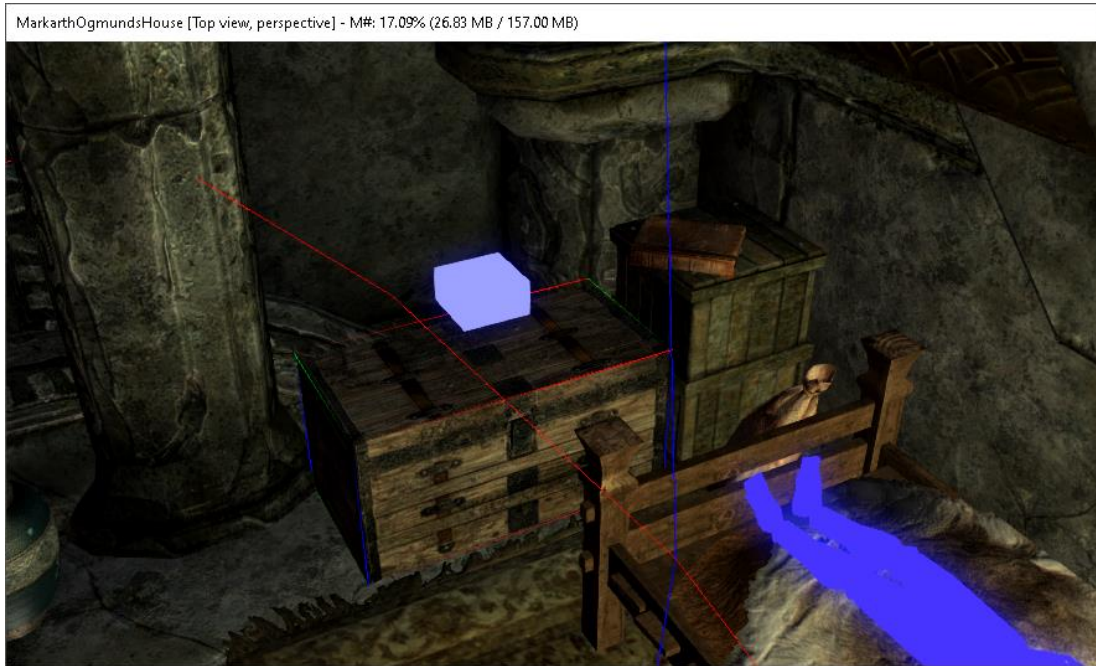


Figure 349 - TGRWealthyHomeChest.

HouseMainDoorRefType is applied to the front door object of a dwelling. It's used by the Companions Animal Extermination side quest as well as the marriage side quest.

There's also a HouseBackDoorRefType but I don't think it's used by anything.

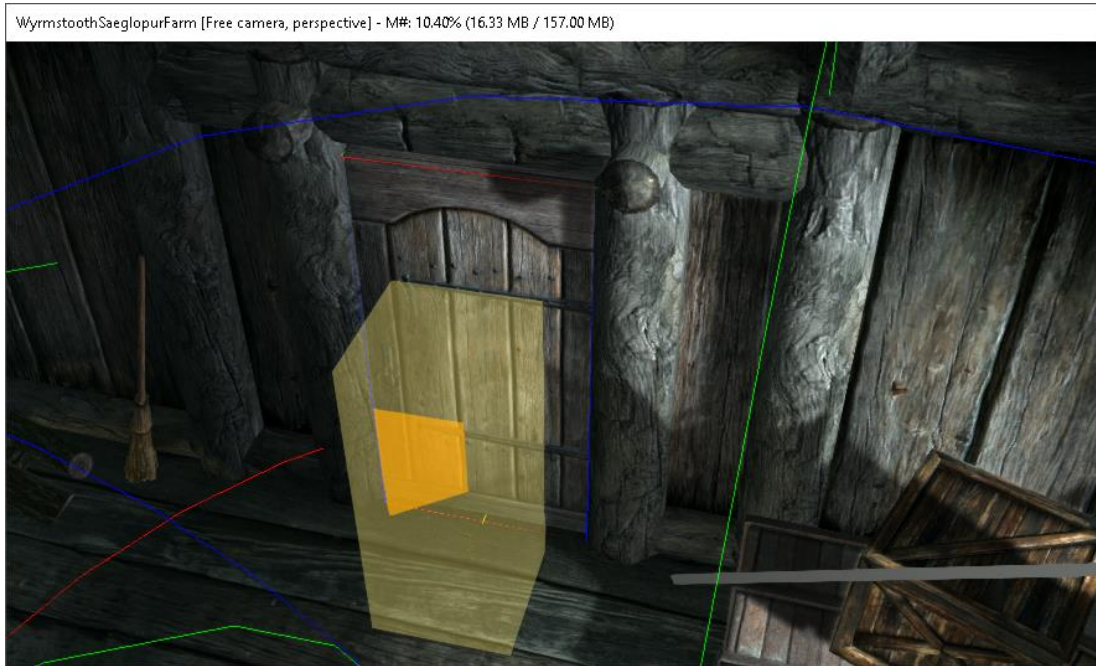


Figure 350 - HouseMainDoorRefType.

HouseContainerRefType is applied to a chest in a dwelling where an item may spawn (not related to Thieves Guild side quests). It's specifically used by the side quest That Was Always There.

Important: You should only flag containers with HouseContainerRefType.

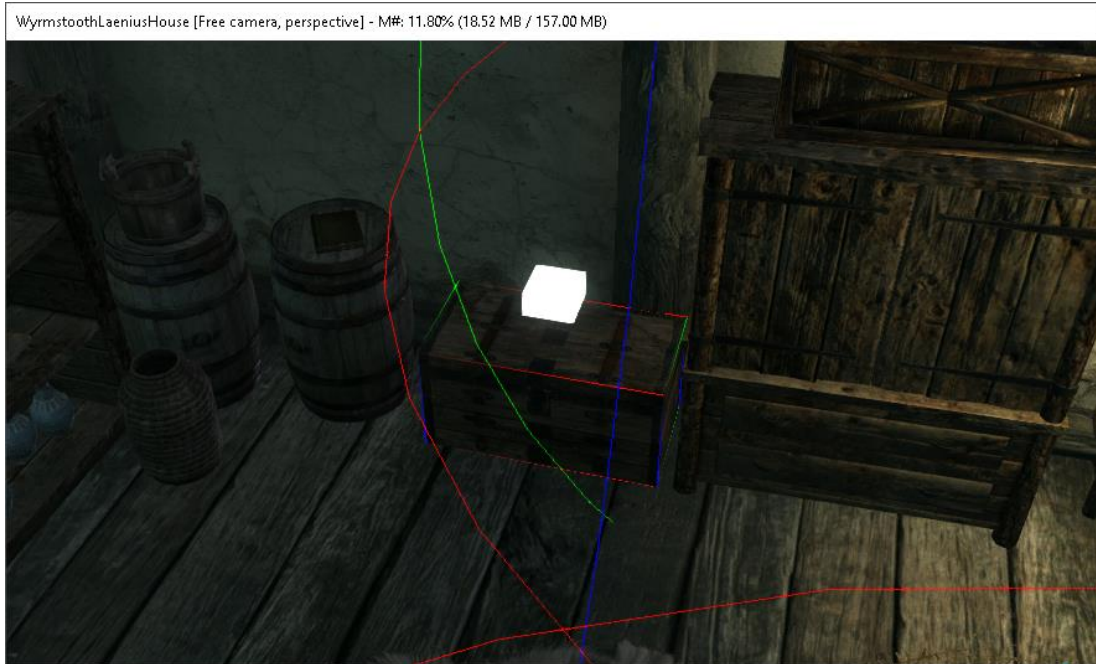


Figure 351 - HouseContainerRefType.

LocationEdgeMarker is placed near the border of a cell belonging to a particular location. It's mostly used by a bunch of civil war side quests, however random encounters do use it as well.

It's also used by the Blades Dragon Hunting and the Companions Escaped Criminal side quests.



Figure 352 - Location Edge Marker.