Visualising the Conflict
Second Life Content Creation Process
By Kerri McCusker (2010)

Introduction

Part of the work outlined in the AHRC proposal relating to 'Visualising the Conflict' was to create a Virtual Learning Environment in Second Life which would allow users to interact with the information on physical memorials and to engage with other users. A key aspect of this was firstly design the SL island and then to build the content. In this case the main content was to be 3D models of a selection of the physical memorials to the conflict in Northern Ireland. The source for the information on the memorials was the pre-existing database compiled by CAIN as part of the first AHRC-funded project. This paper sets out the process by which the models were constructed in SL.

Content Creation

As with all basic Second Life accounts, both content creation and scripting functionality is provided. All the content developed for "Visualising the Conflict" was solely created in-world through these tools.

15 predefined basic shapes (known as prims) are available. Each of these prims can be altered in size (to a maximum of 10x10x10 meters). The position and rotation can also be altered.

Once a basic shape has been selected and created (known as rezed), prims can be applied with colour or a texture. RGB values can be input as well as uploaded textures (graphics). There is a L$10 fee applied to all uploads.

Further options are available such as Path cutting, hollowing, twisting, shearing, tapering and slicing.

Other settings include transparency, glow, flexibility, light, physical, and phantom.

Mesh was not supported upon project commencement.
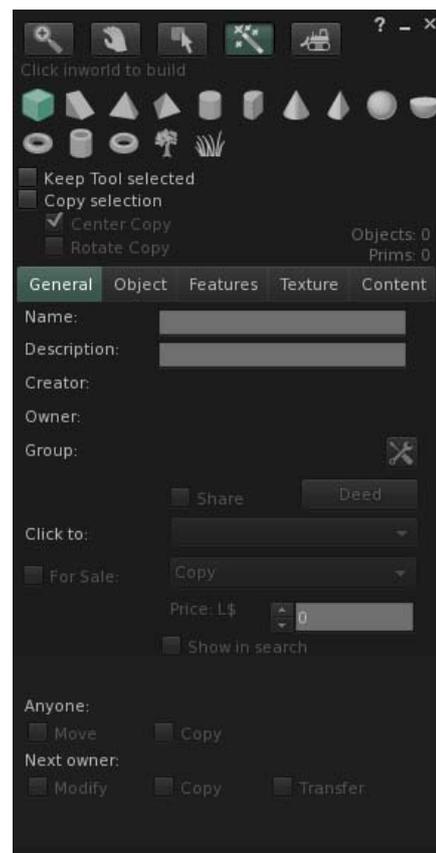
A collection of photographs for each of the memorials are available via
http://cain.ulst.ac.uk/victims/memorials/search.html

These photographs provided the basis of the actual model to be created. An indication of the size and structure was gauged from the numerous photographed angles. Editing software was used extensively to rotate, skew, remove backgrounds, brighten crop and optimise photographs.

Most memorials could be categorised into the following sections:

- Murals
- Plaques
- Crosses
- Memorial Stones
- Sculptures
- Windows

As each of the categories provided a specific method of creation, each will be discussed separately.

Murals

The content creation of murals generally included the following

1. Judgment of size and shape for shape creation
2. Import into editing software
3. Through colour picker select the default wall colour from photograph
4. Apply specific copy colour values to all faces
5. Effects/Actions on photograph through editing software
6. Upload and apply texture on face(s) in Second Life

In order to reduce the cost of uploads, several optimised murals where added to create one graphic – texture alignment options allow a specific texture to be placed onto one face (or multiple faces) of a prim.

A step-by-step process is documented which allows the process of mural creation to be visualised.
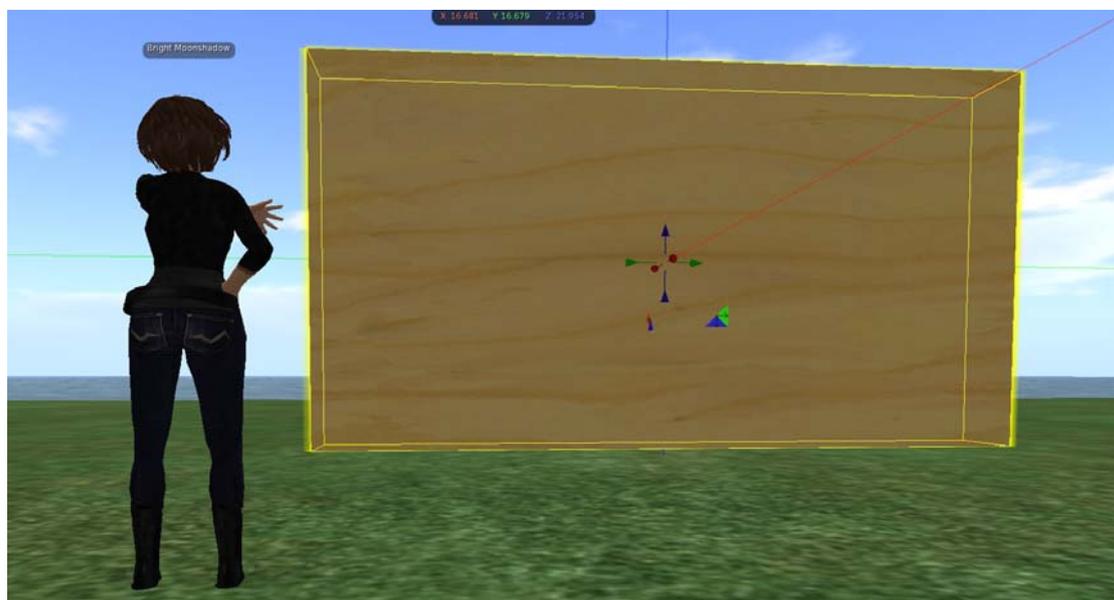
Figure 1: Recreation of the mural wall through judgment of size and shape from photograph

Figure 2: Copying and importation of graphics from CAIN website into editing software.
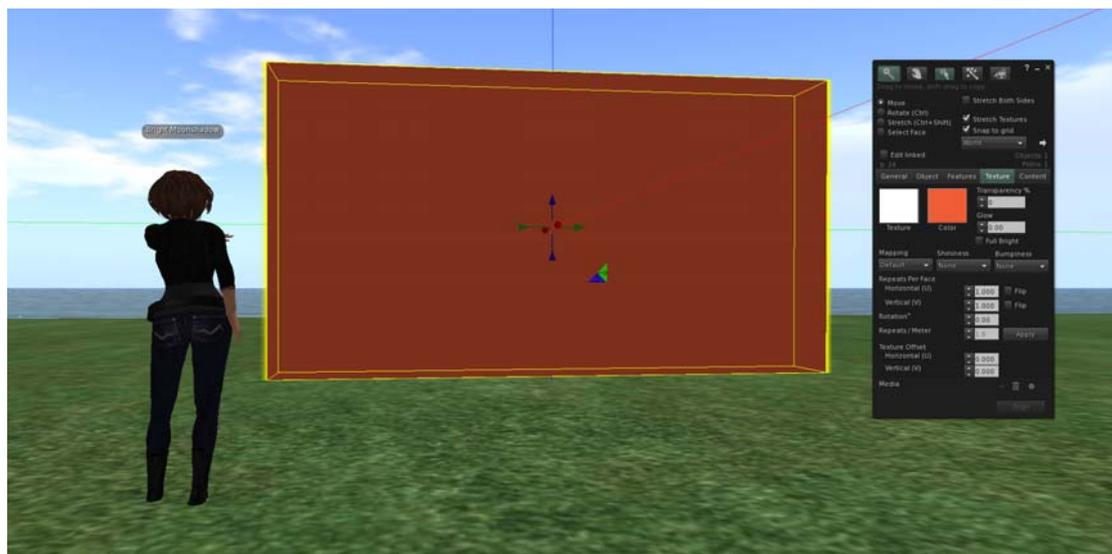Colour from wall background selected and copied

Figure 3: Colour value from editing software pasted into the colour value field in Second Life.
Colour applied to all faces

Figure 4: Applying effect and actions on photograph, most common actions include cropping and skewing image
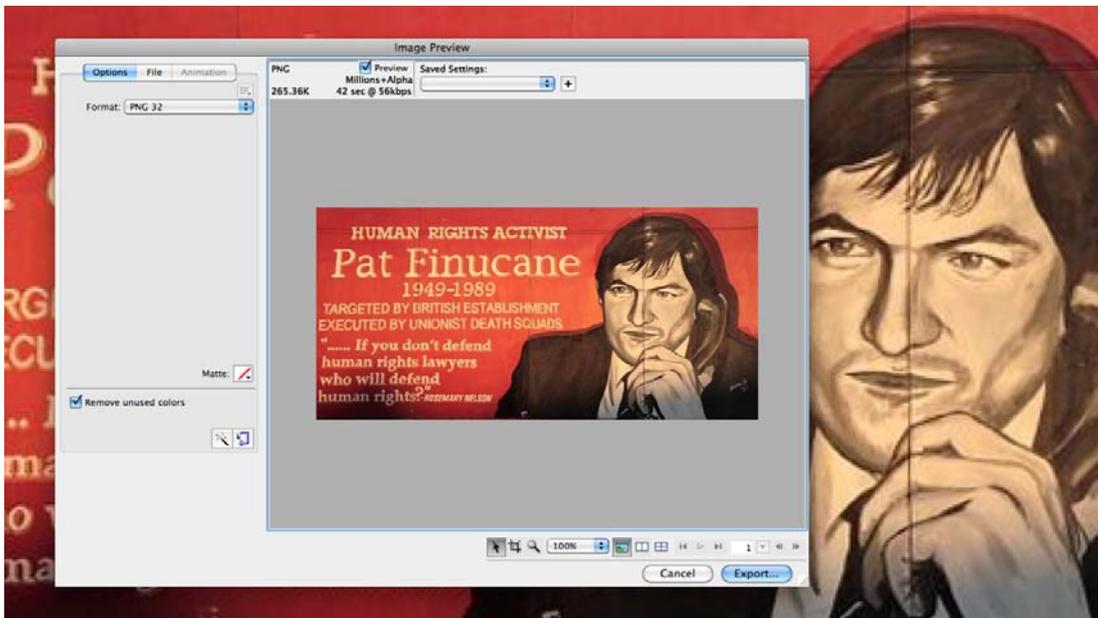

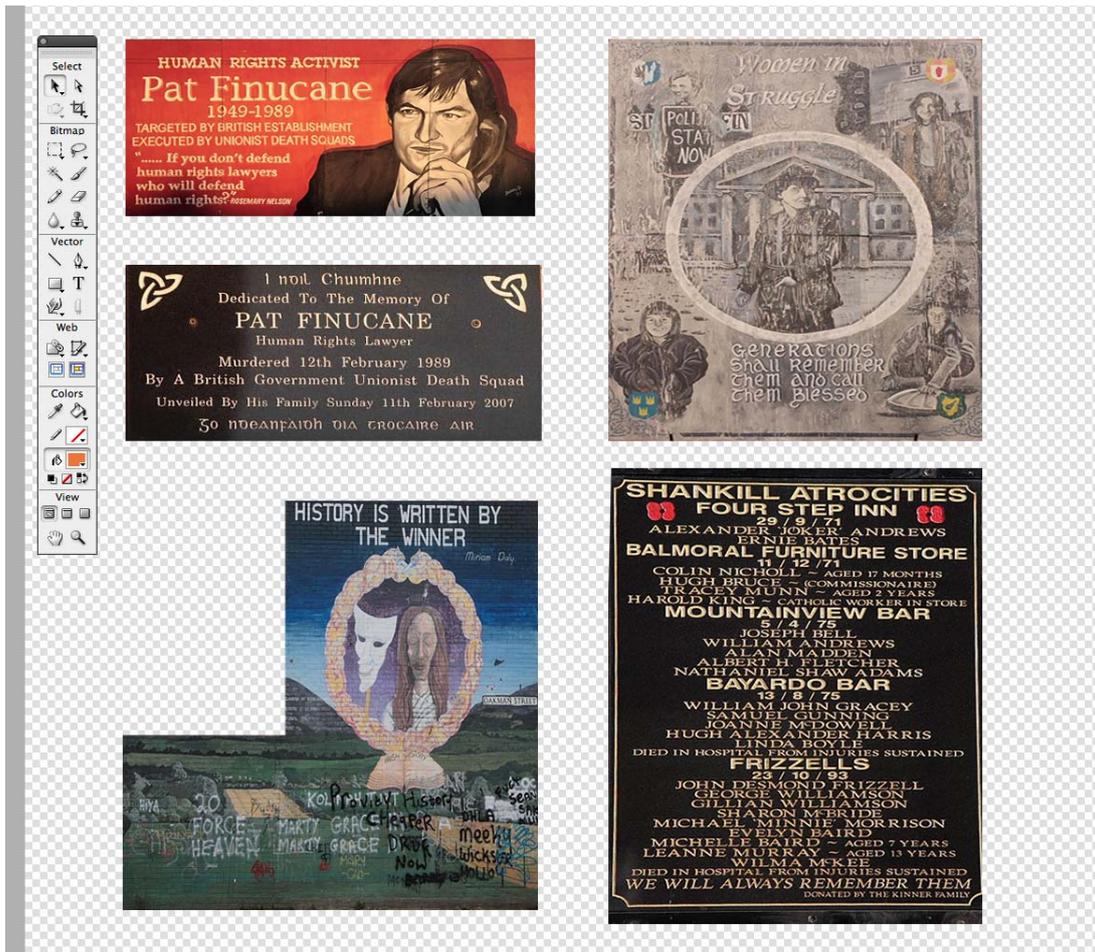Figure 5: Exporting image, saving in specific category folder (i.e. civilian) and using the CAIN code for each image (i.e 563)

Figure 6: Multiple graphics where added to one larger transparent graphic which was exported as a PNG

Figure 7: Collective graphic uploaded into Second Life for $L10
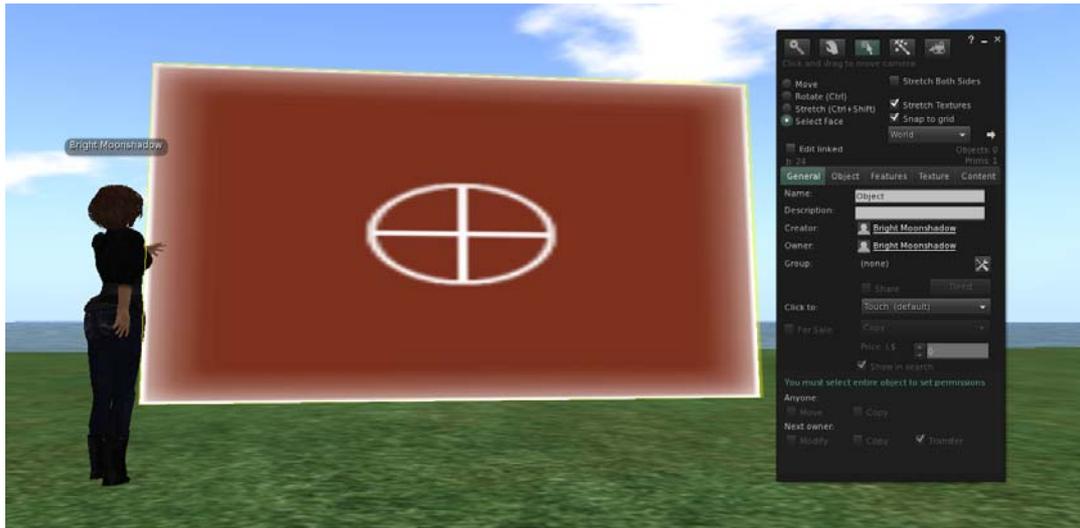
Figure 8: In order to allow only the front facing face of the prim to be selected, edit > select face > and clicking on specific face allows the texture to be only applied to the area with the highlighted target
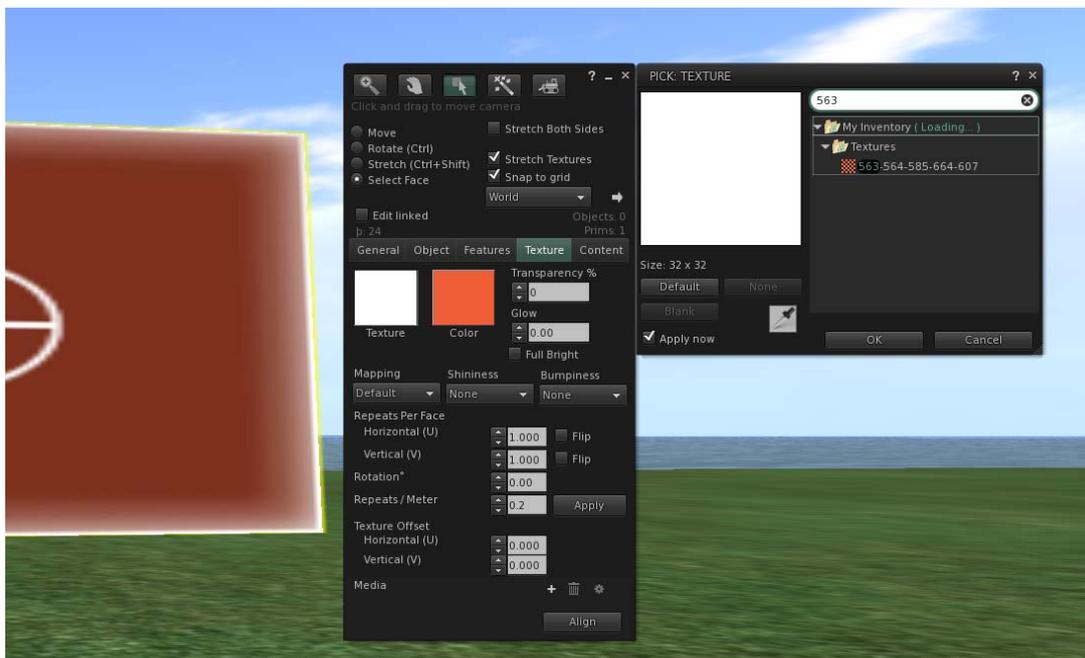
Figure 9: Edit > Texture > Input texture code > Select > OK will select and apply specific texture

Figure 10: Two issues need to be resolved, firstly the colour value for this specific face of the wall needs to be set to default, and as a collective graphic of many memorials has been put on a transparent background – time needs to be spent adjusting the texture offset. The second issue is exemplified in figure 11.

Figure 11: Changing the colour of the selected face so that the red colour is removed only from the front facing prim.
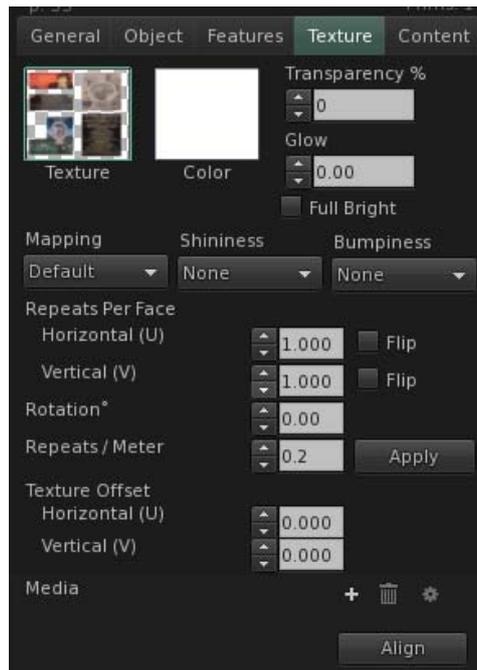
Figure 12: Default texture values
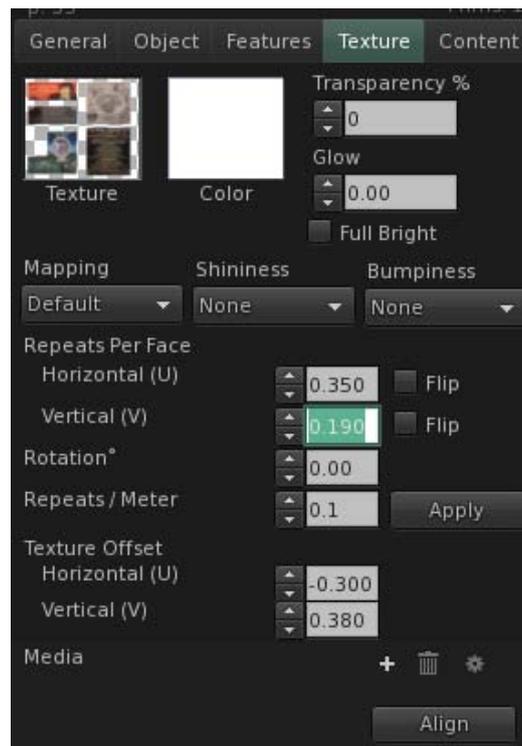
Figure 13: Adjusted texture values
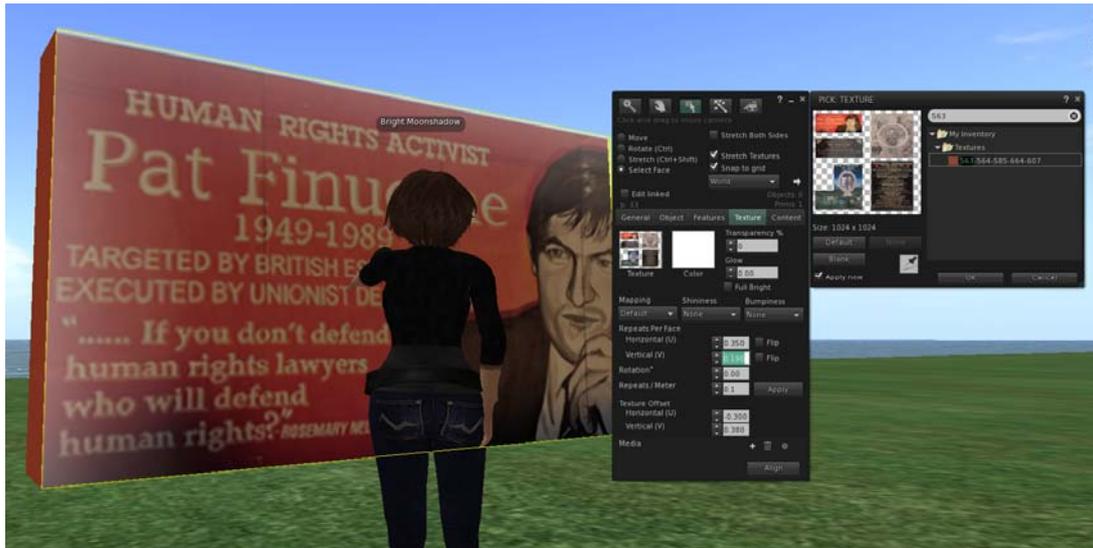
Figure 14: Adjusted texture preview

Figure 15: Completed memorial

Figure 16: Actual Memorial
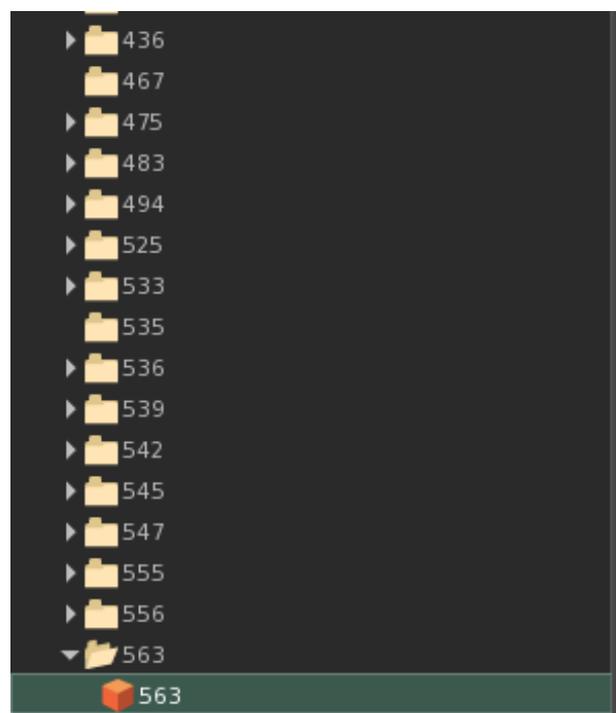
Figure 17: Object given memorial name (from CAIN) placed in specific folder under the specific category (Civilian)

Plaques

The content creation of a plaque follows a similar process to murals.

1. Judgment of size and shape for shape creation
2. Import into editing software
3. Through colour picker select the default wall colour from photograph
4. Apply specific copy colour values to all faces
5. Effects/Actions on photograph through editing software
6. Upload and apply texture on face(s) in Second Life
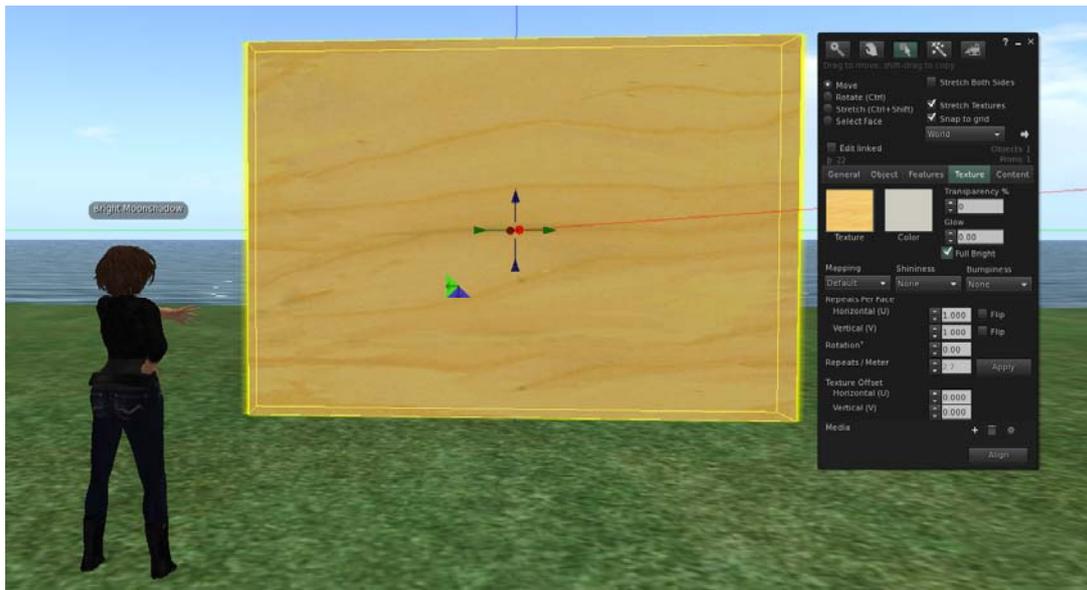
Figure 18: Recreating the mural wall through judgment of size and shape from photograph
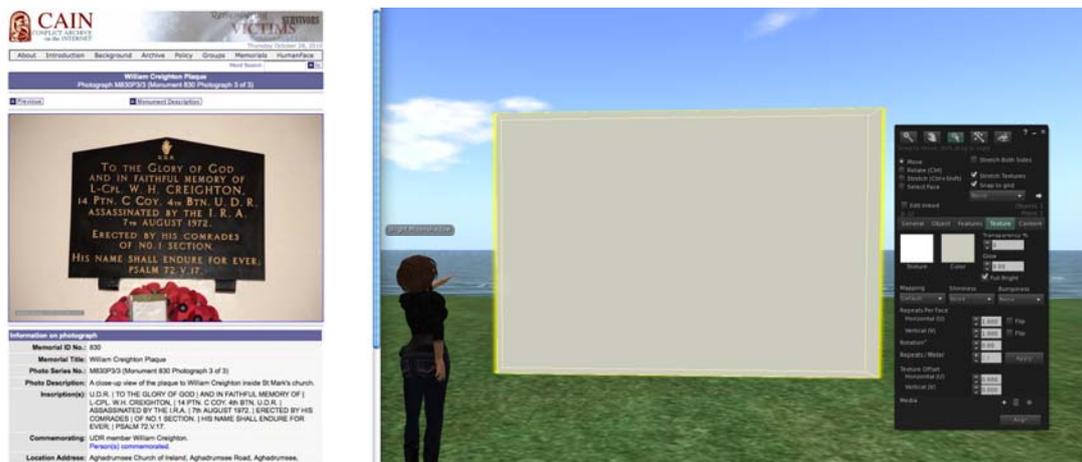
Figure 19: Applying colour value from editing software colour picker onto prim
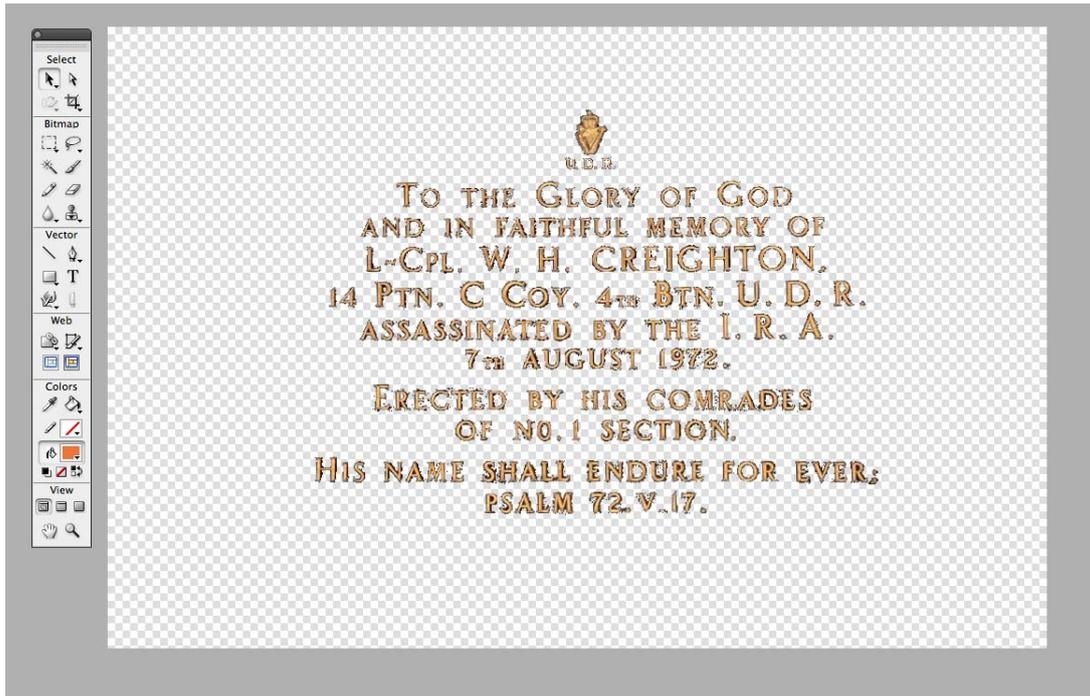
Figure 20: Importing image of plaque > using magic wand tool to remove background > make background transparent > optimise > export and PNG
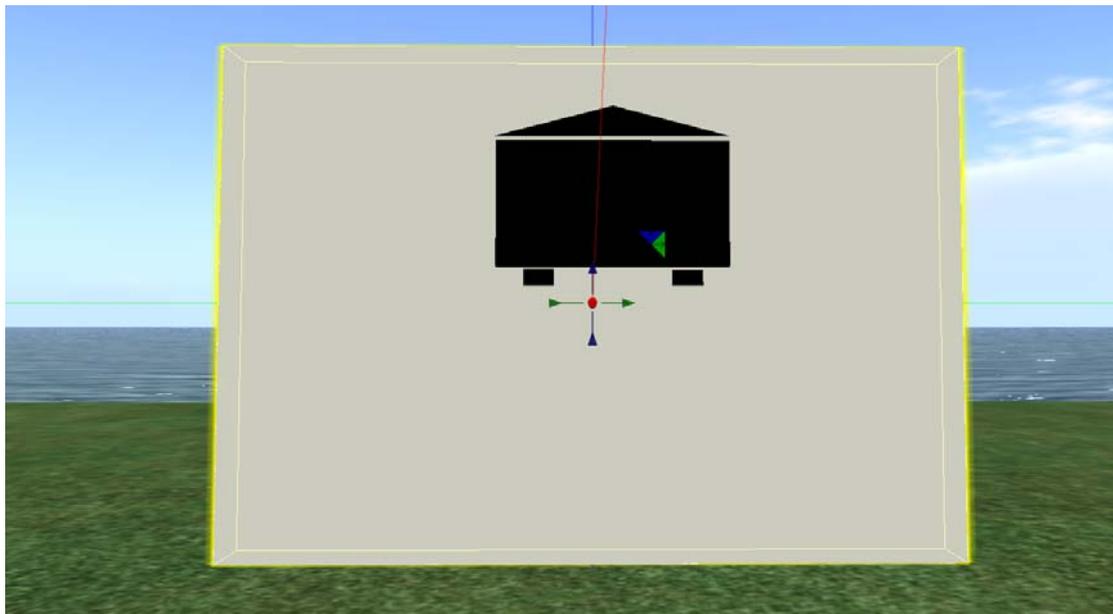
Figure 21: Recreation of plaque > one black square prim > one cloned square prim tapered to create triangular shape > cloned square adjusted to small square, duplicated and cloned
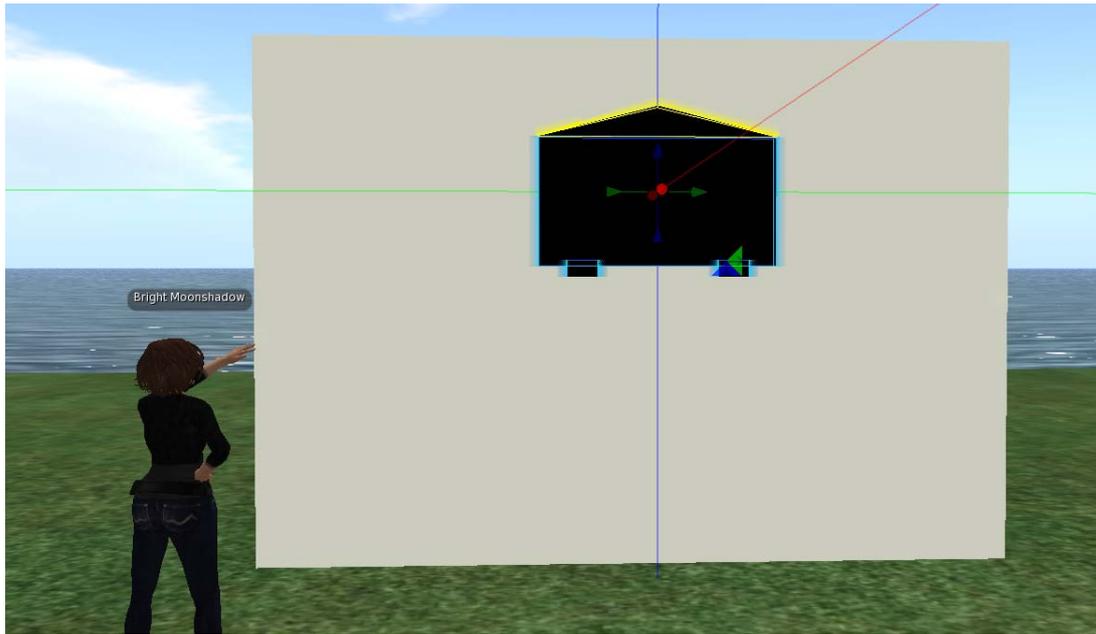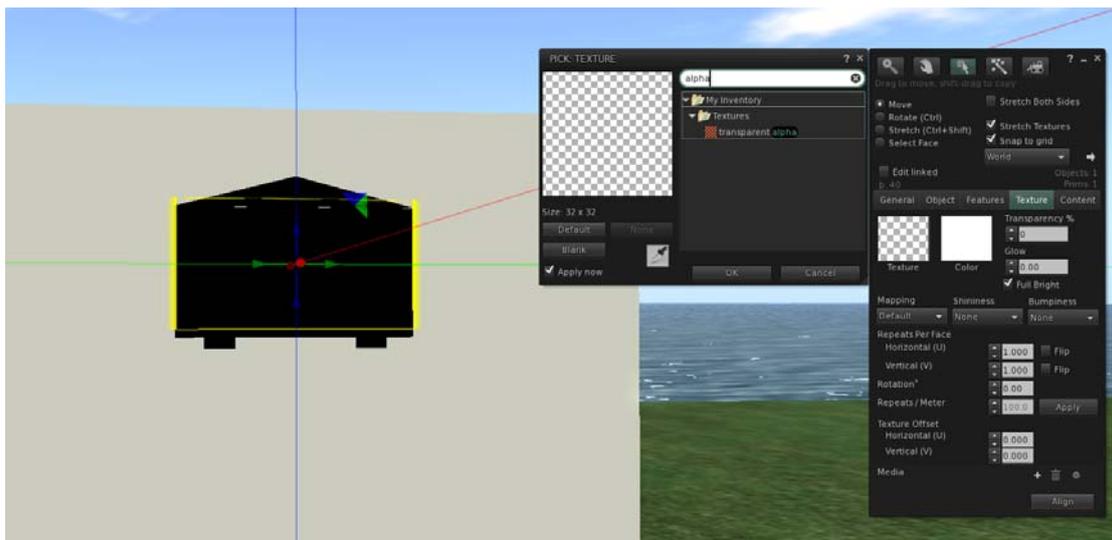
Figure 22: Piecing together of prims into a group

Figure 23: Creation of thin transparent prim which covers the front of the plaque face so that the texture can be uploaded onto one face without the restriction of applying the texture to each piece of the grouped prims. (Otherwise many textures would need to be uploaded)
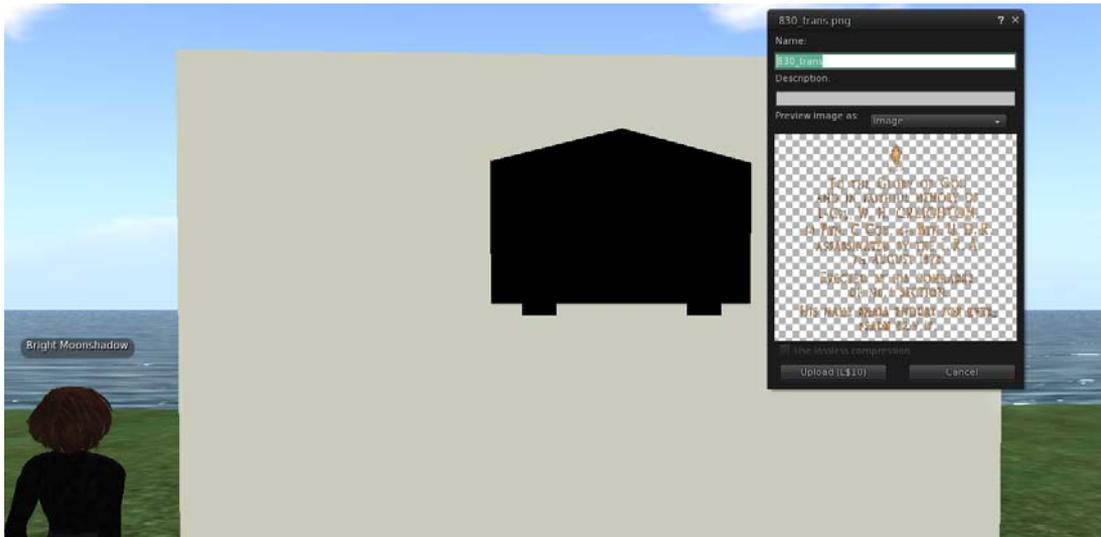
Figure 24: Uploading of graphics into Second Life
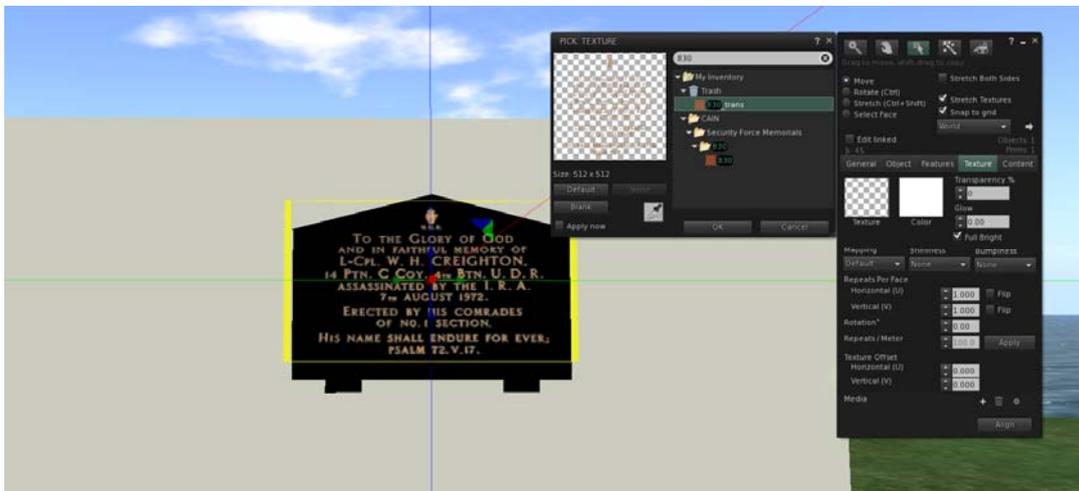
Figure 25: Application of the texture onto the transparent prim which covers the front of the plaque. Adjustment to the size and position of the transparent prim needed to ensure that t is an accurate representation of the replicated plaque

Figure 26: All prims grouped and the collection of prims are renamed to the memorial number on CAIN

Figure 27: Actual Memorial
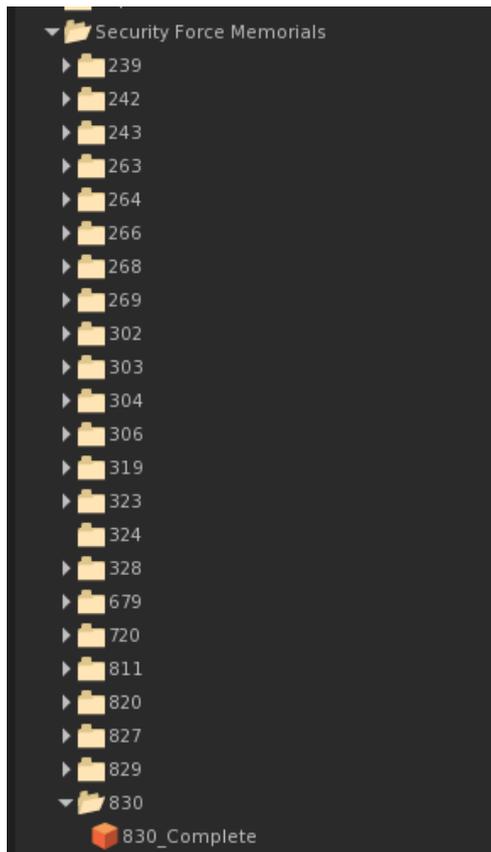
Figure 28: Object given memorial name (from CAIN) placed in specific folder under the specific category (Security Force Memorials)

Crosses

The content creation of crosses obviously varies across each of the different styles of memorials. The most detailed is documented below.

1. Judgment of size and shape for shape creation
2. Through colour picker select the default cross colour from photograph
3. Apply specific copy colour values to all faces
4. Effects/Actions on photograph through editing software
5. Upload and apply texture on face(s) in Second Life
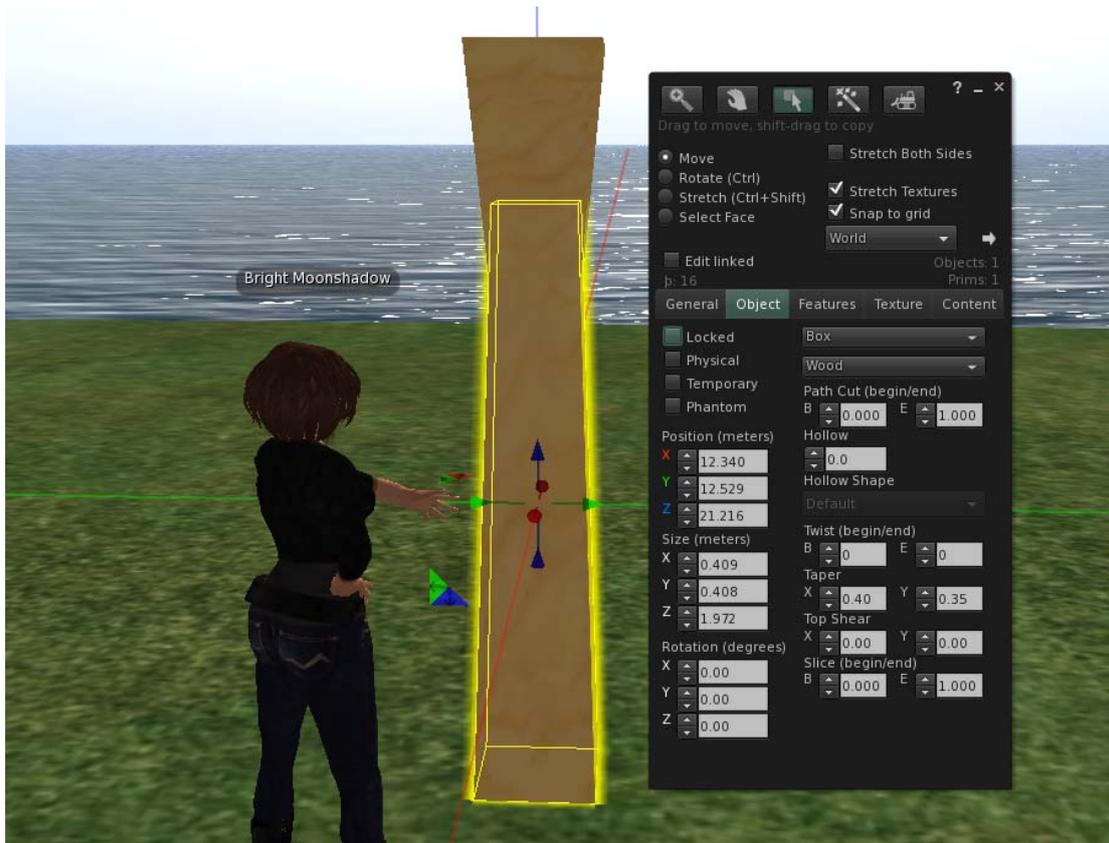
Figure 29: Creation of simple tapered rectangular prim, cloned and rotated 180 degrees
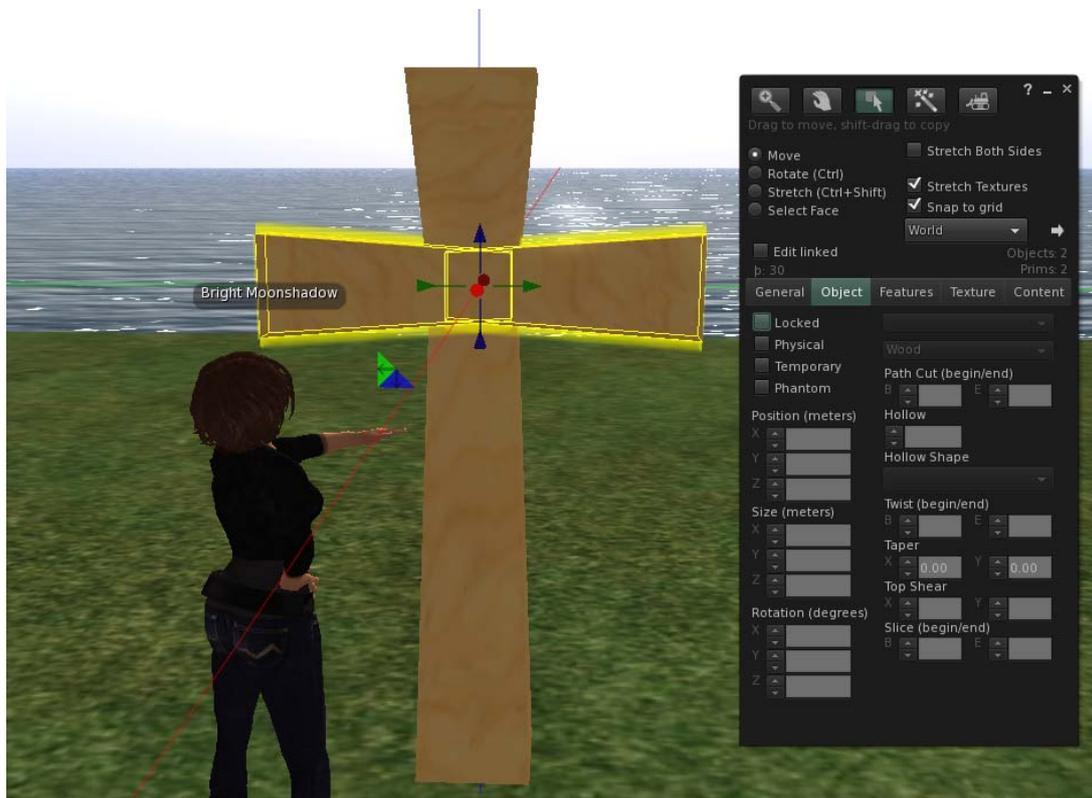
Figure 30: Cloned prim, made smaller and placed horizontally across the stem of the cross
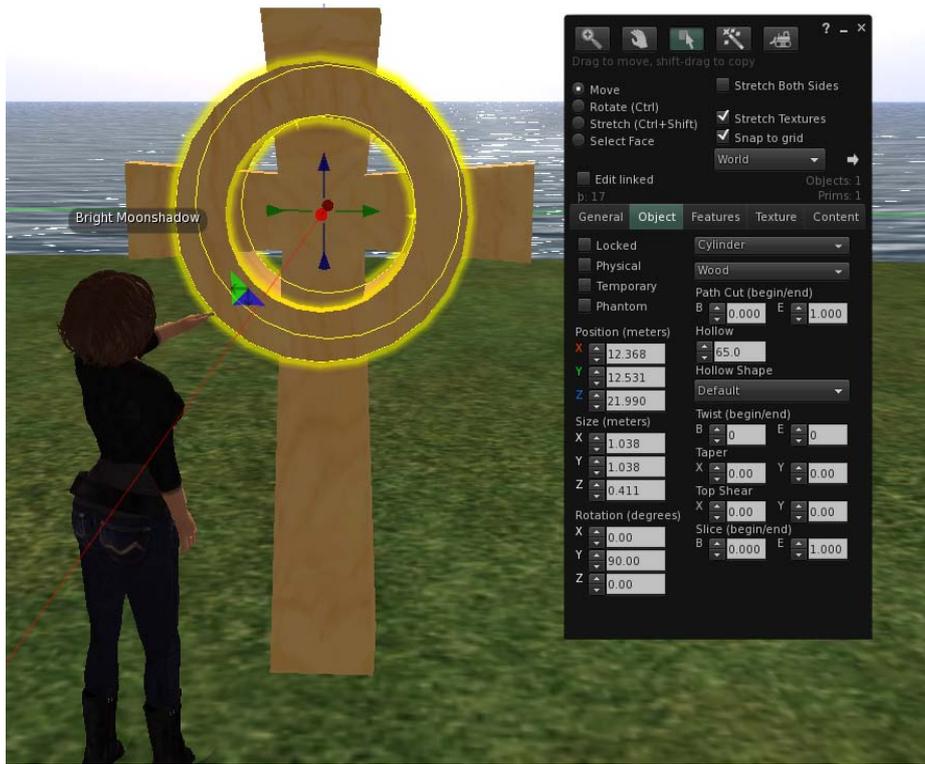
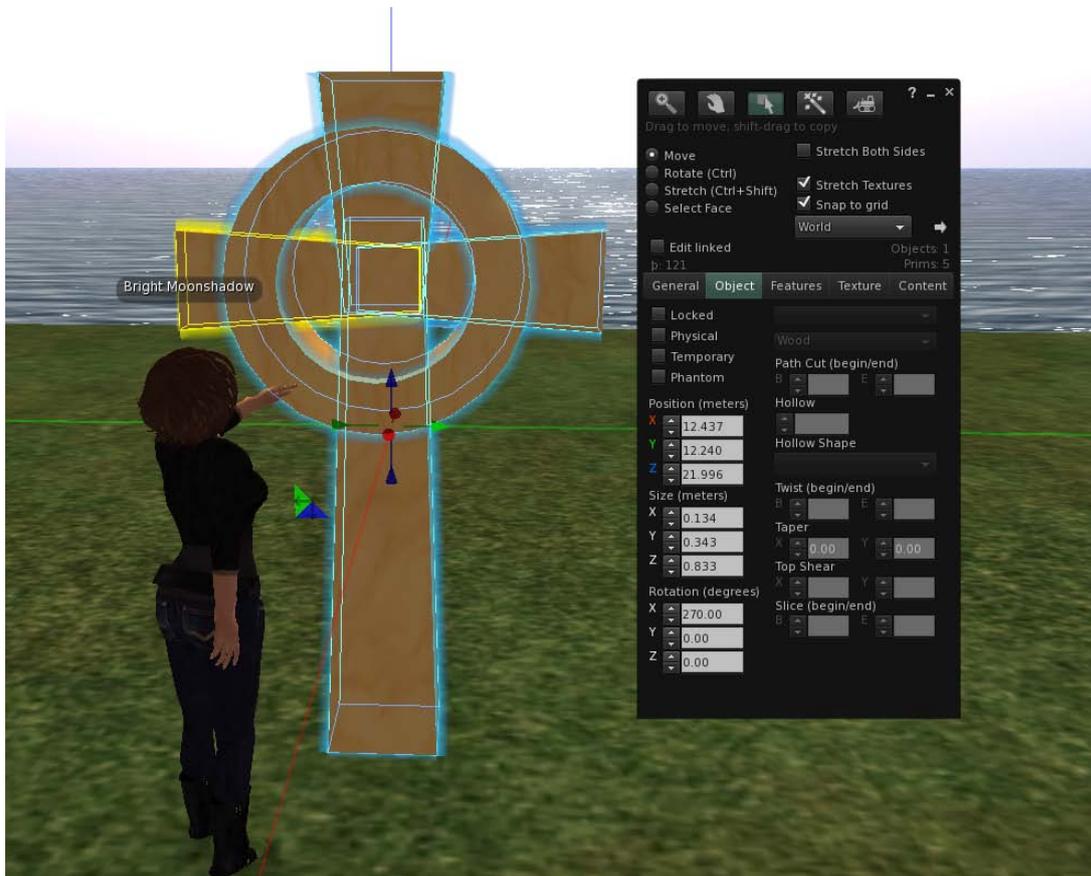Figure 31: Creation of cylinder prim with a hollow of 65
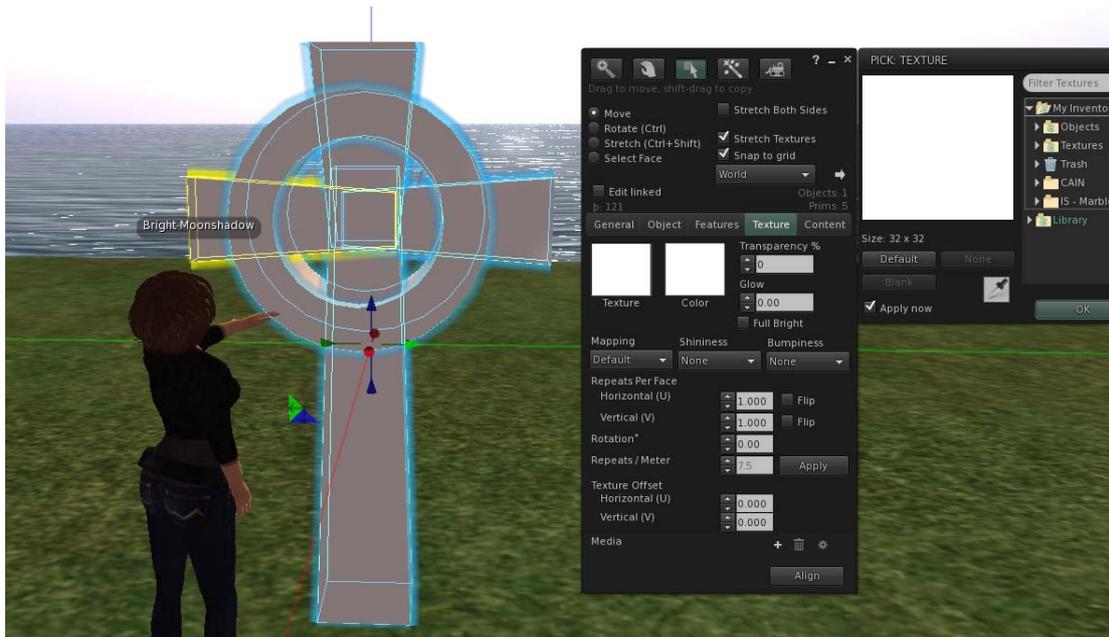

Figure 32: Selecting and grouping of prims

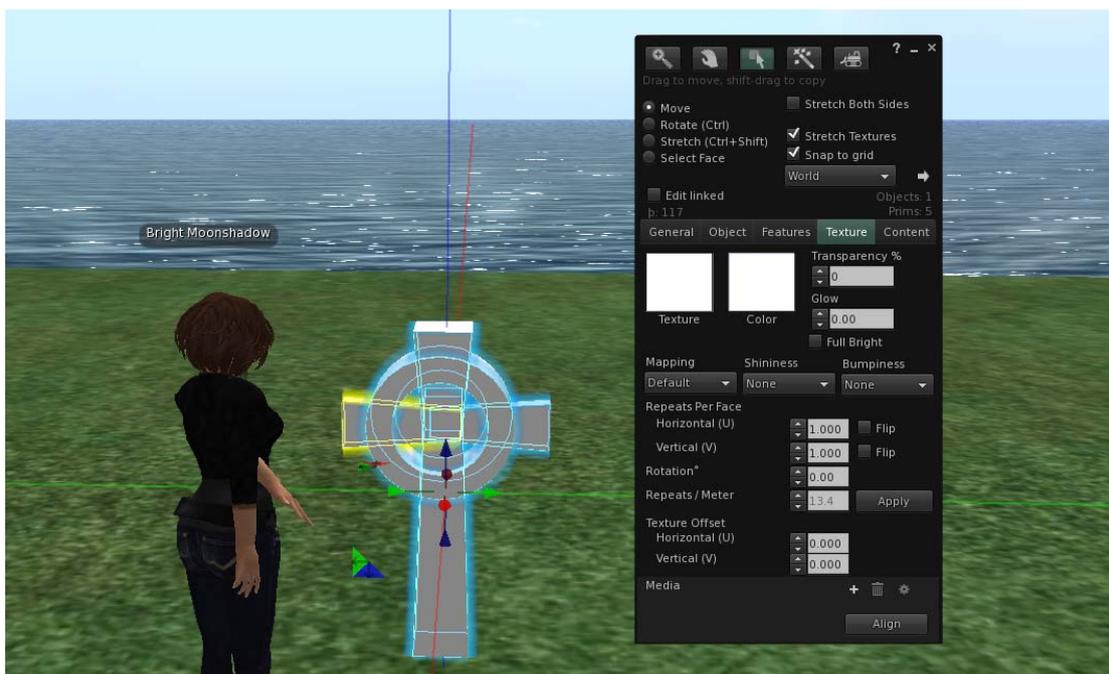Figure 33: Applying white to all the grouped prims

Figure 34: Making prim smaller, through selected grouped prims and simply rescaling

As this memorial contains two plaques and a flag, for the purposes of this document only the crosses content creation in the memorial will be illustrated.
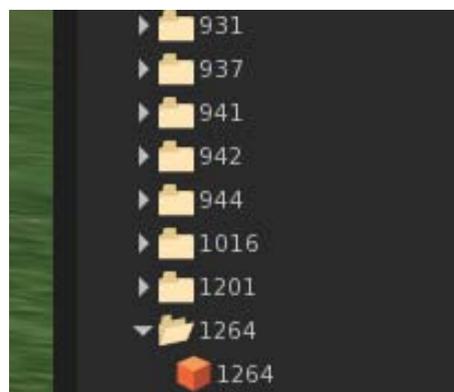
Figure 35: Creation of grass hill - crosses to be cloned and disturbed

Figure 36: Entire replicated memorial

Figure 37: Actual Memorial

Figure 38: Object given memorial name (from CAIN) placed in specific folder under the specific category (Republican)

Memorial Stones

The content creation of a memorial stones tends to follow the same stages.

1. Judgment of size and shape for shape creation
2. Import into editing software
3. Through colour picker select the default memorial stones colour from photograph
4. Apply specific copy colour values to all faces

5. Effects/Actions on photograph through editing software
6. Upload and apply texture on face(s) in Second Life
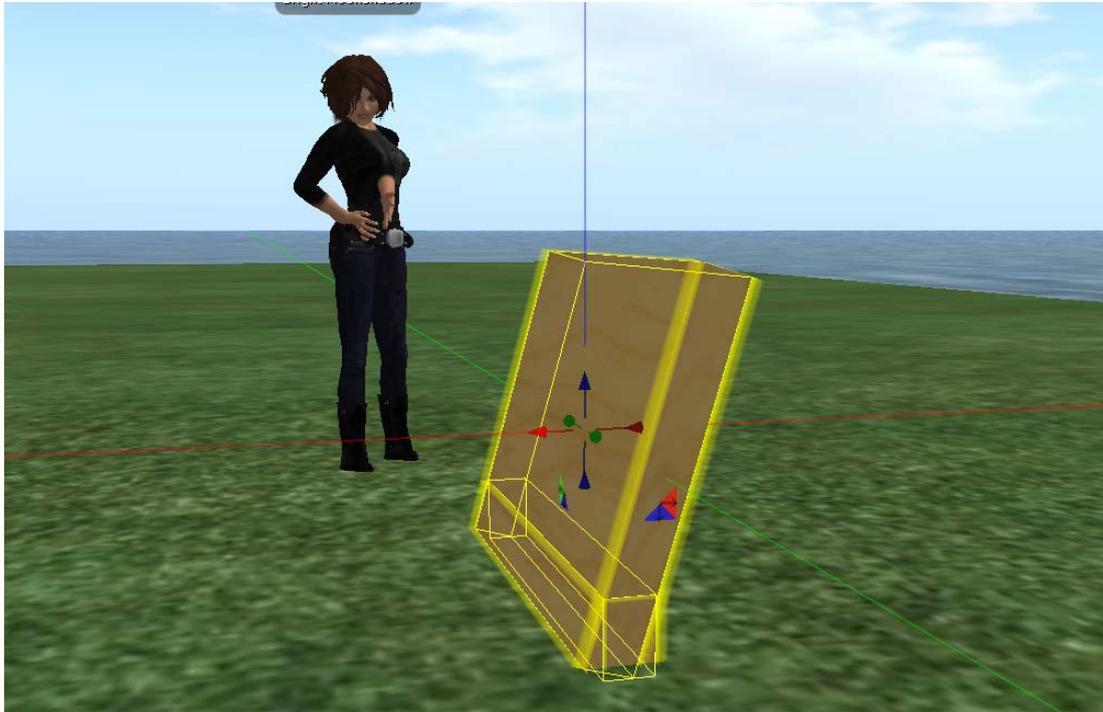
Figure 39: Judgment of size and shape replicated through one rectangular and one square prim, with the square from rotated 340 degrees to be representative of memorial stone
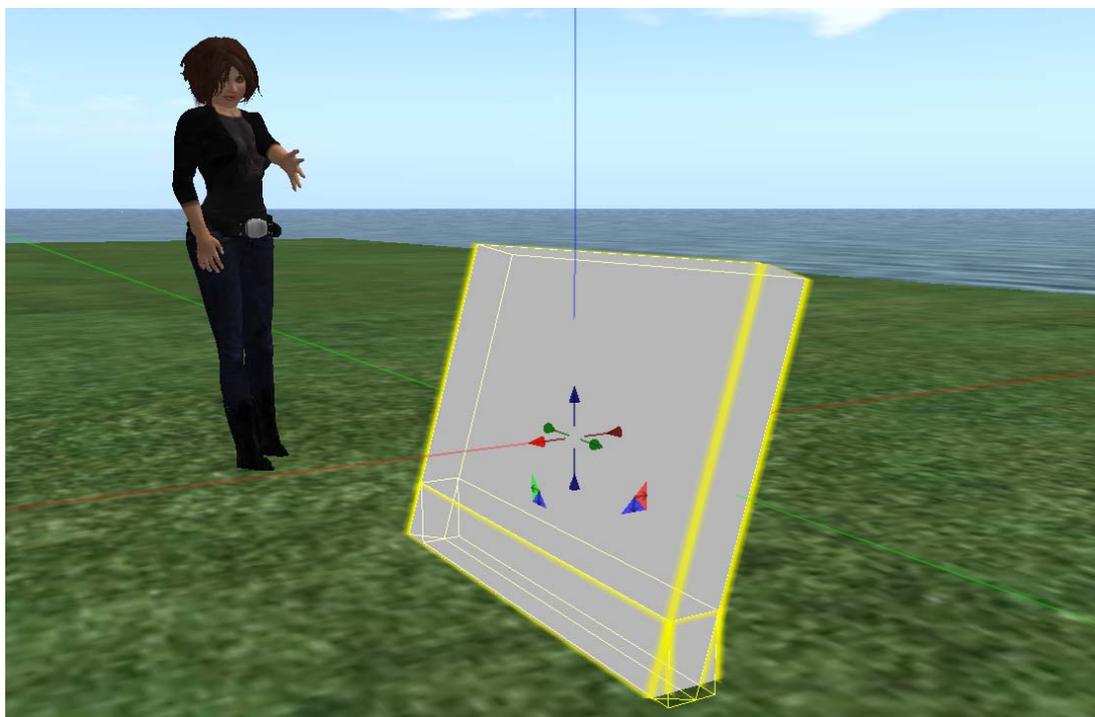
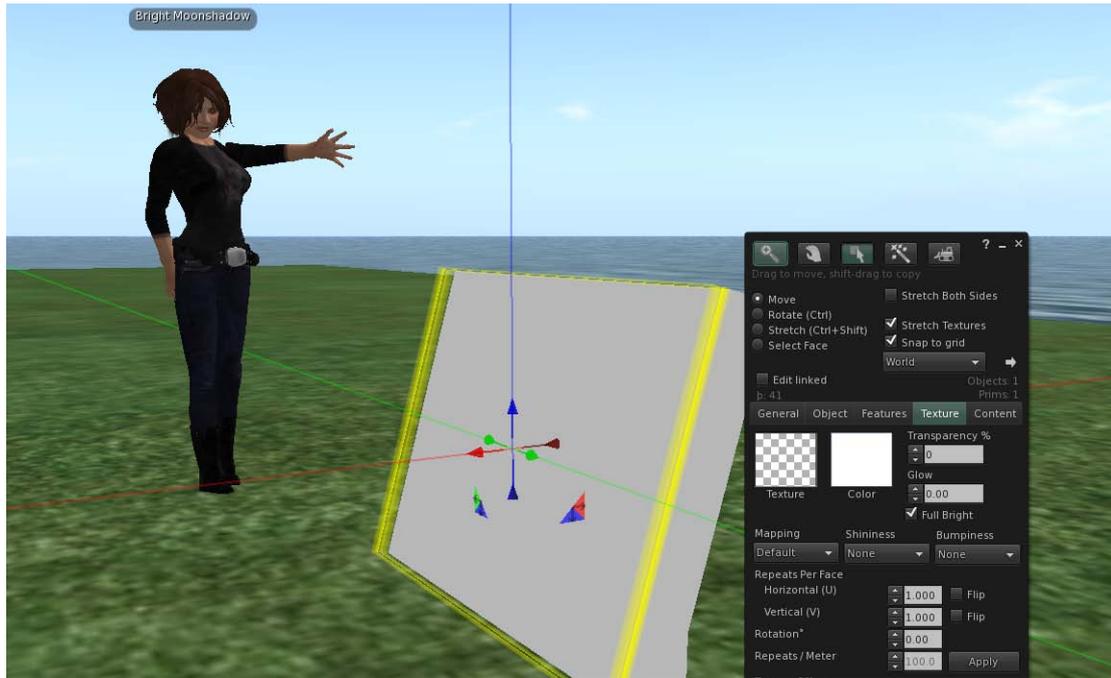Figure 40: Applying solid colour values to both prims

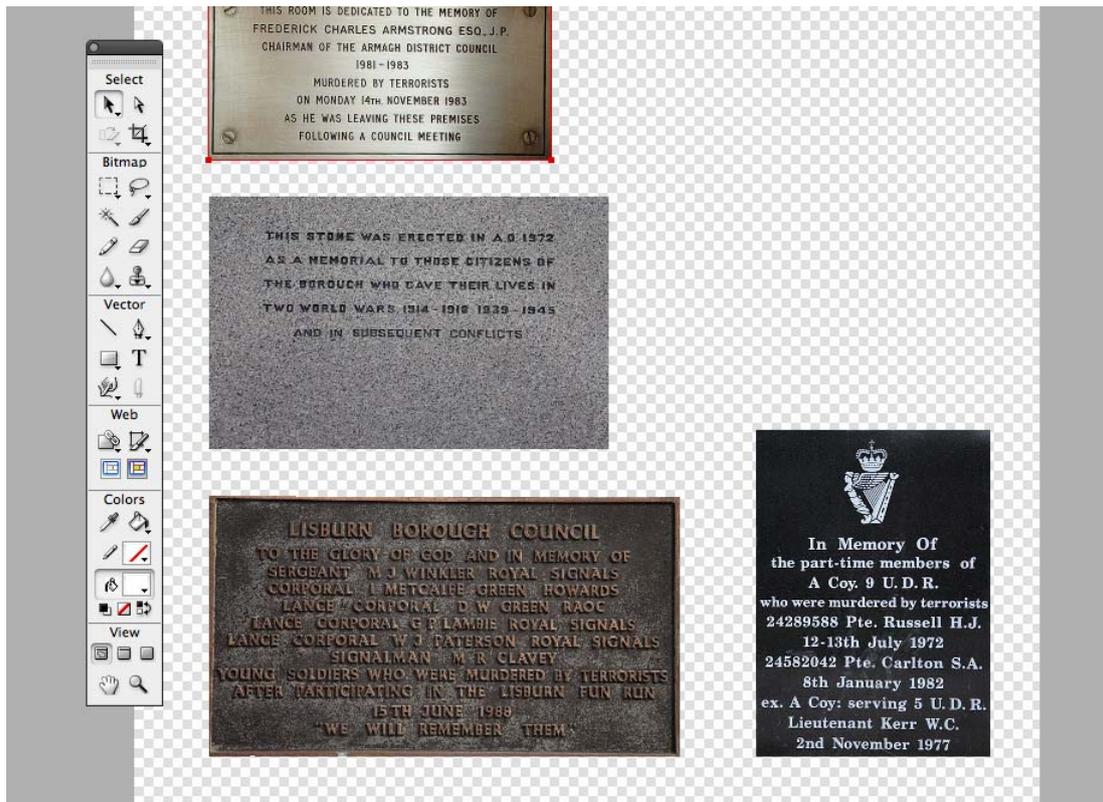Figure 41: Creation of cloned rotated square prim with applied transparent texture to facilitate texture

Figure 42: Multiple texture complied in editing software
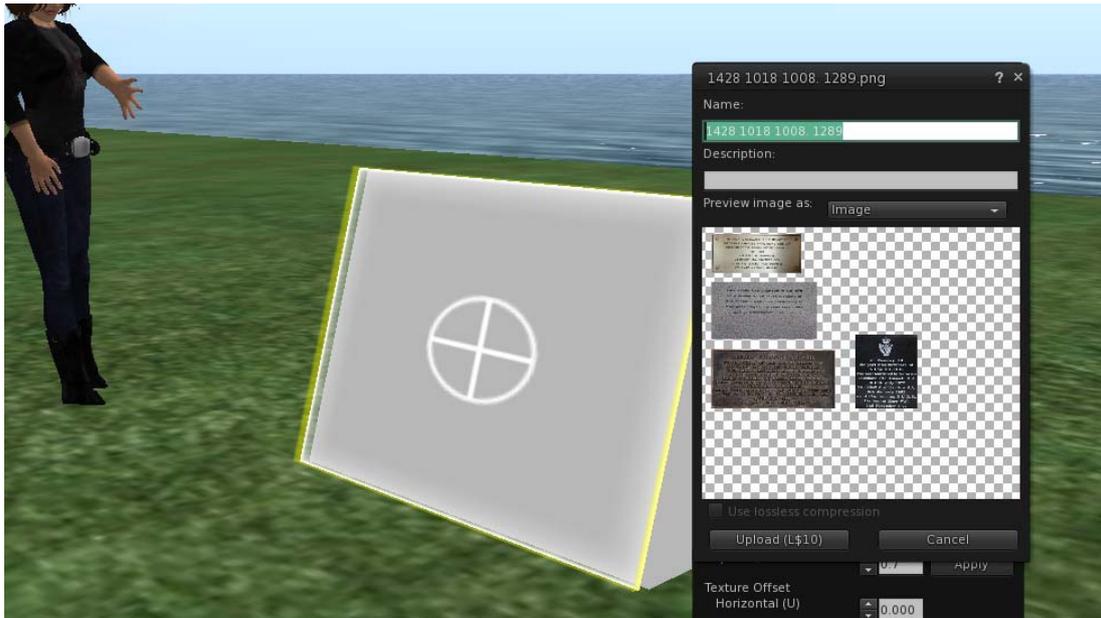
Figure 43: Multiple texture uploaded into single upload file and the front face of the transparent prim is selected for the texture

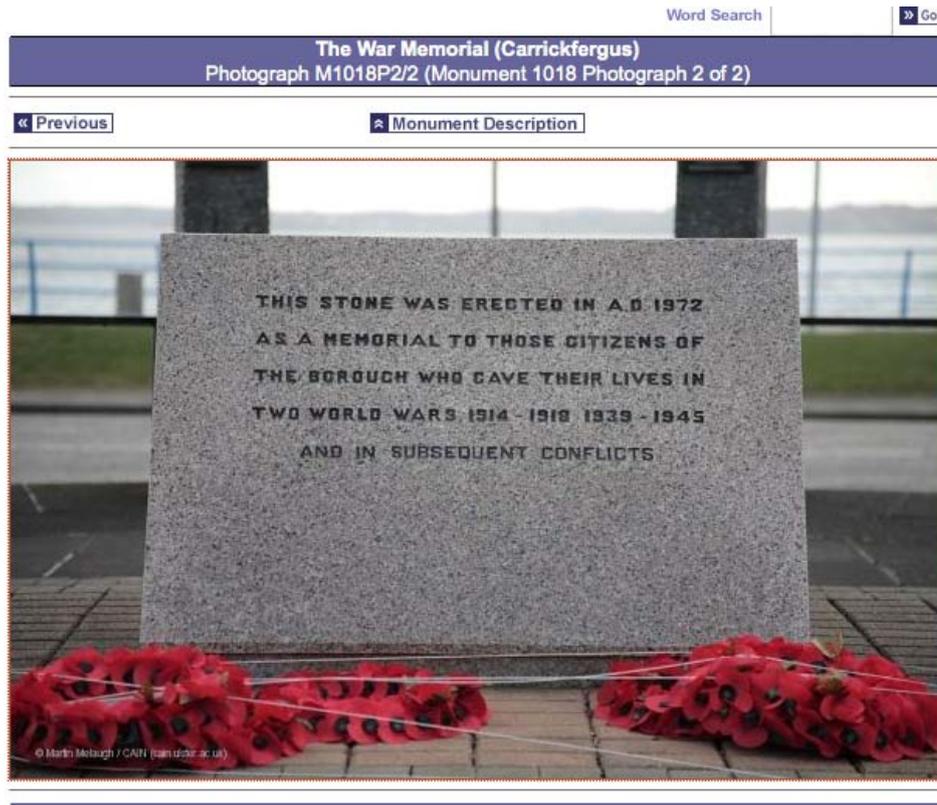Figure 44: Application of the texture to selected face

Figure 45: Actual Memorial Stone

Figure 46: Object given memorial name (from CAIN) placed in specific folder under the specific category (Security Force)

Sculptures

The content creation of sculptures tend to follow the same stages.

1. Judgment of size and shape for shape creation
2. Import into editing software
3. Through colour picker select the default sculptures colour from photograph
4. Apply specific copy colour values to all faces
5. Effects/Actions on photograph through editing software

6. Upload and apply texture on face(s) in Second Life
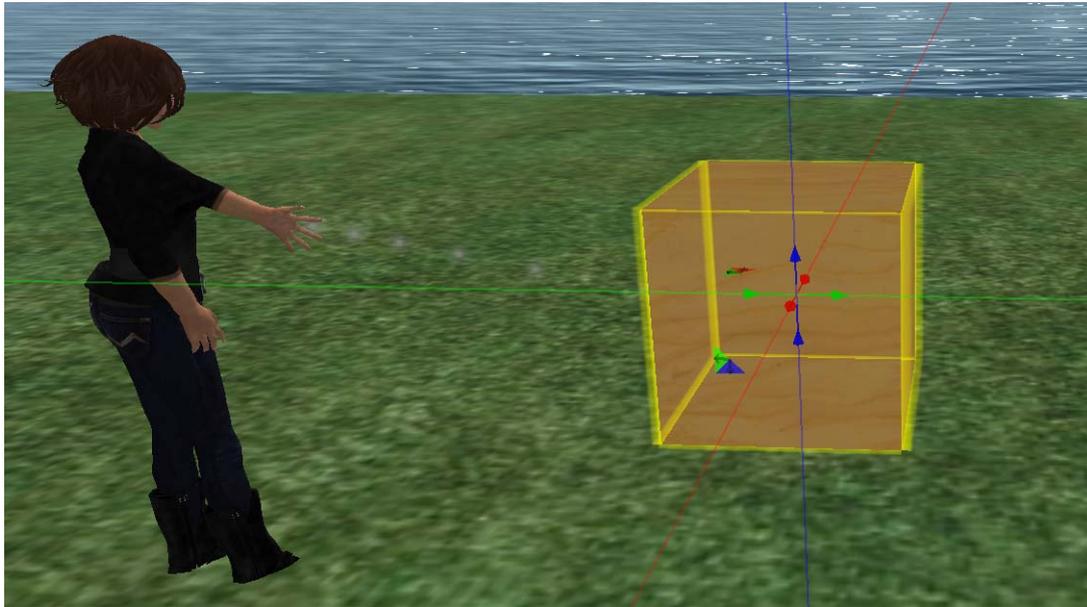
Figure 47: Judgment of the outline of the structure backdrop

Figure 48: Applying colour of supporting wall into Second Life

Due to the lack of support of meshes in Second Life (project commencement May 2010) and the timeline for the content creation, textures of memorials were used.
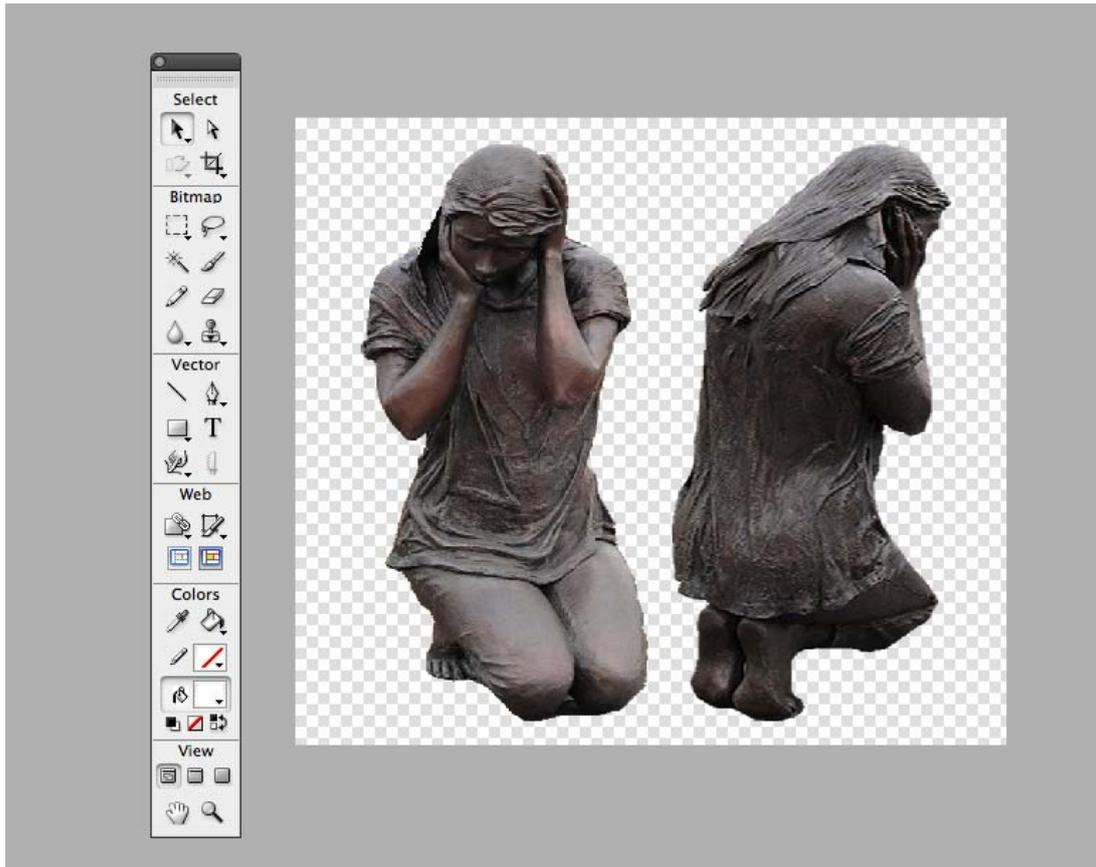
Figure 49: Removal of background from photograph featured on CAIN site. So that users can see at least two perspectives of the memorial – the picture of the back of the sculpture will be also uploaded
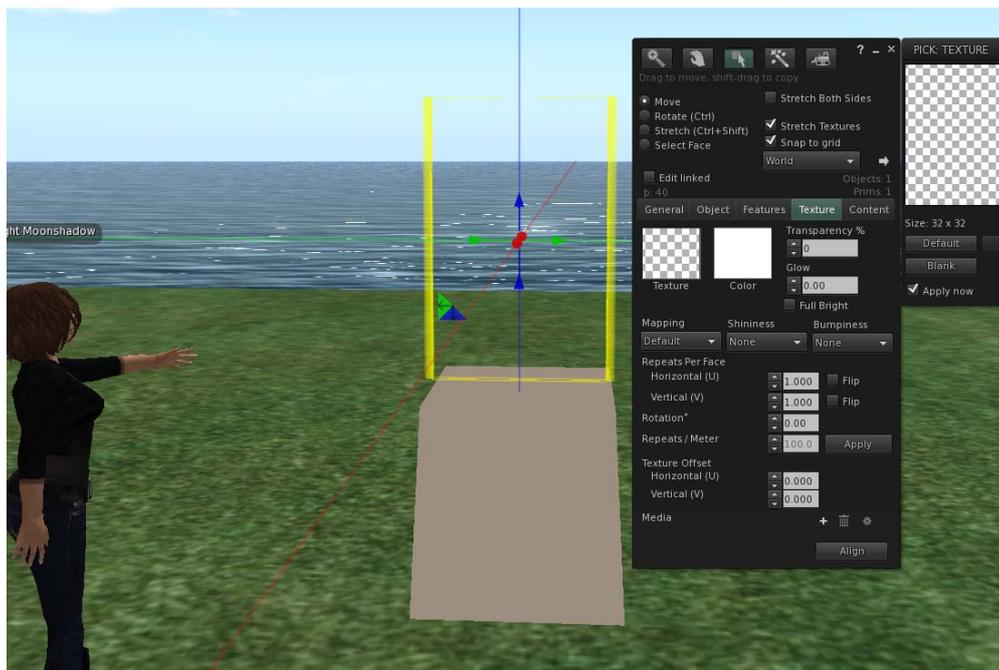
Figure 50: Creation of a transparent prim to facilitate the double-faced texture of sculpture
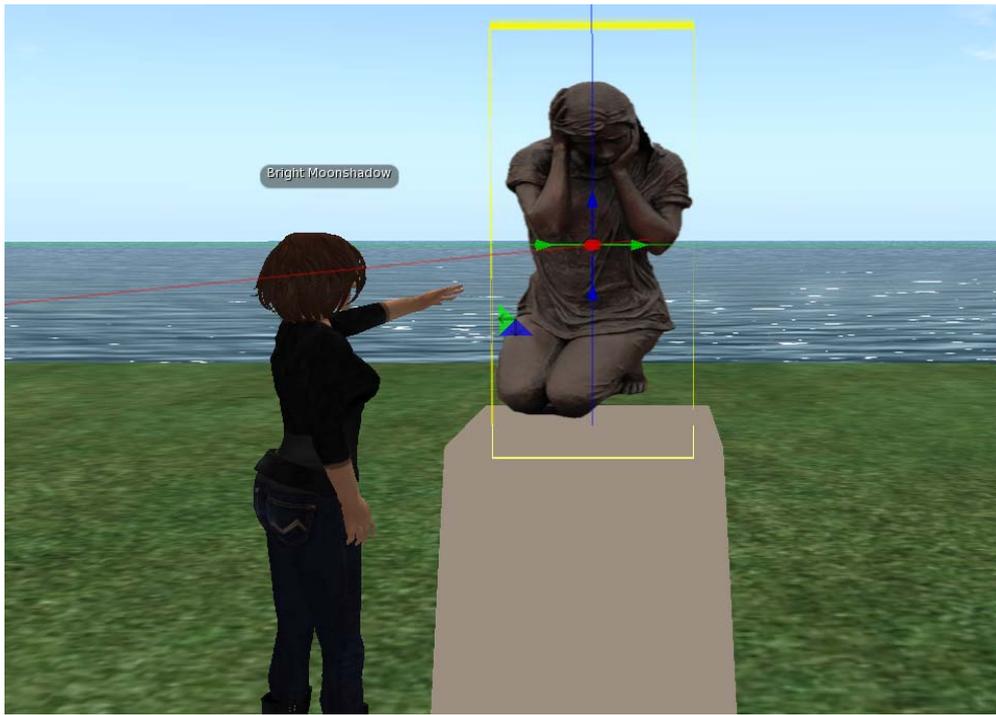
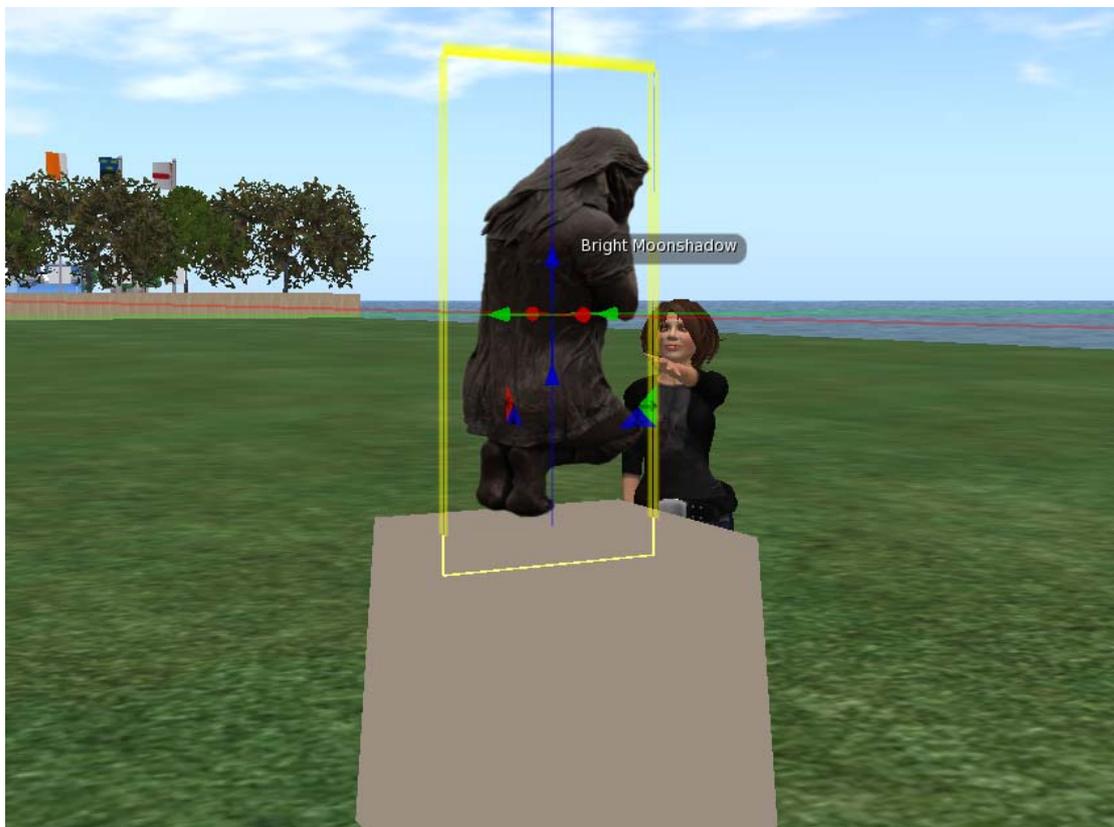Figure 51: Front faced prim application

Figure 52: Back faced prim faced prim application

Figure 53: Actual memorial

Figure 54: Object given memorial name (from CAIN) placed in specific folder under the specific category (Civilian)

Windows

The content creation of windows tend to follow the same stages.

1. Judgment of size and shape for shape creation
2. Import into editing software
3. Effects/Actions on photograph through editing software
4. Upload and apply texture on face(s) in Second Life
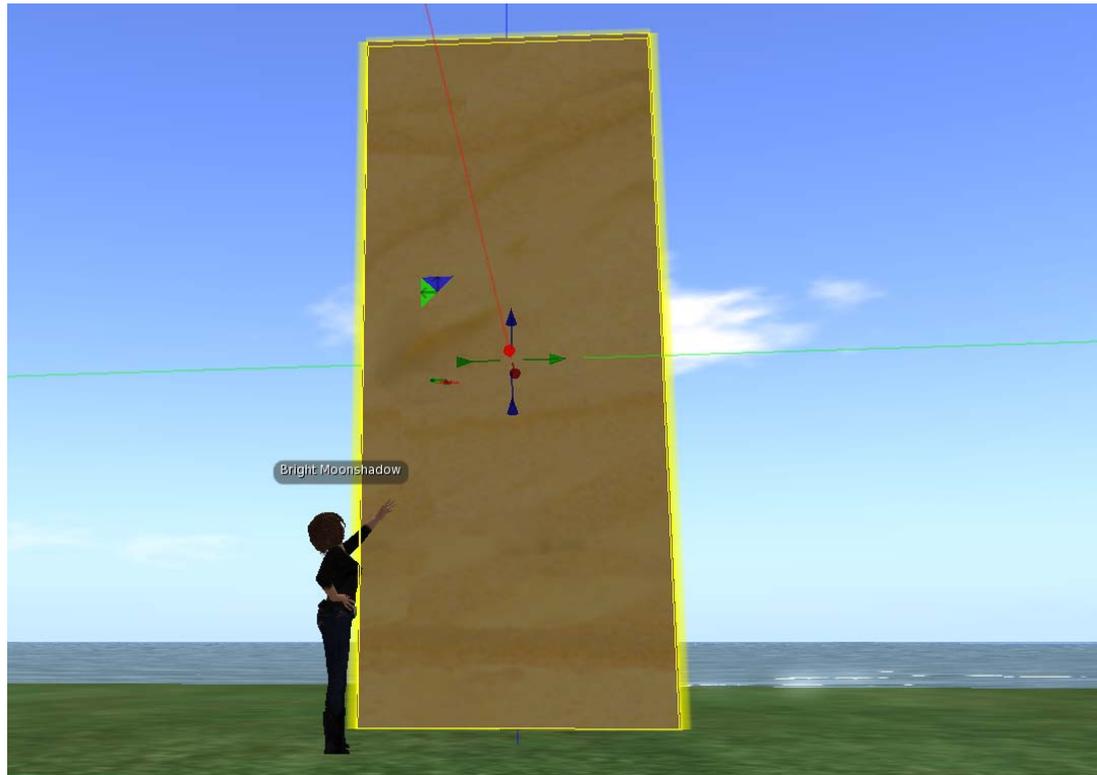
Figure 55: Creation of the basic shape and scale of the window
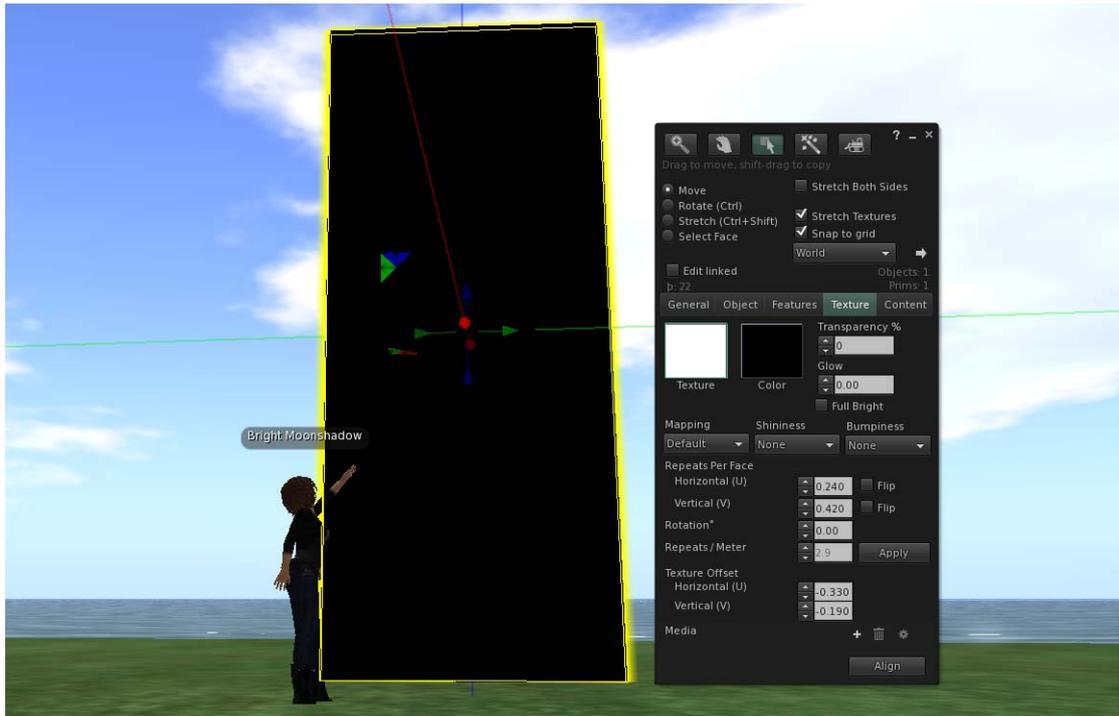
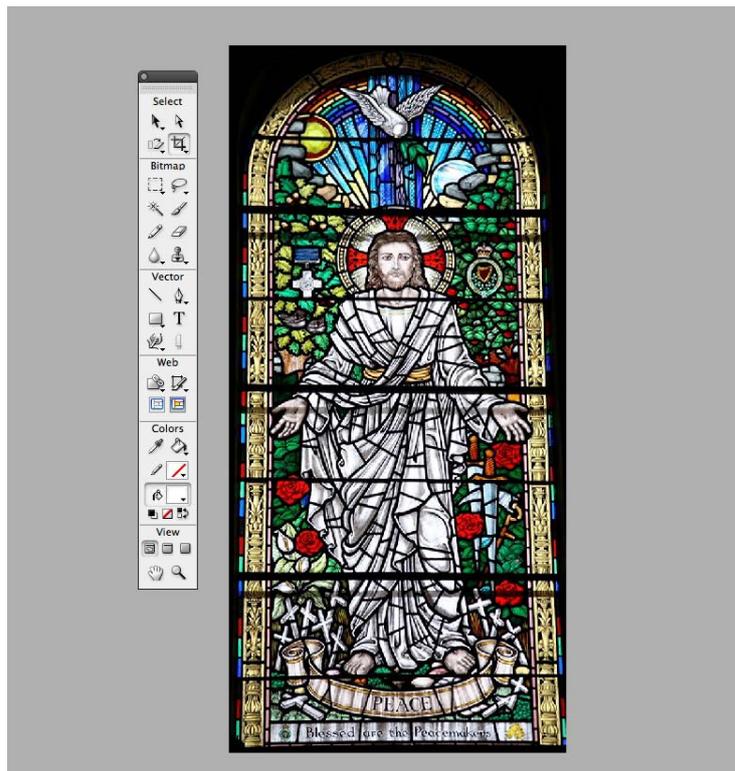Figure 56: Application of black colour on all faces of the prim

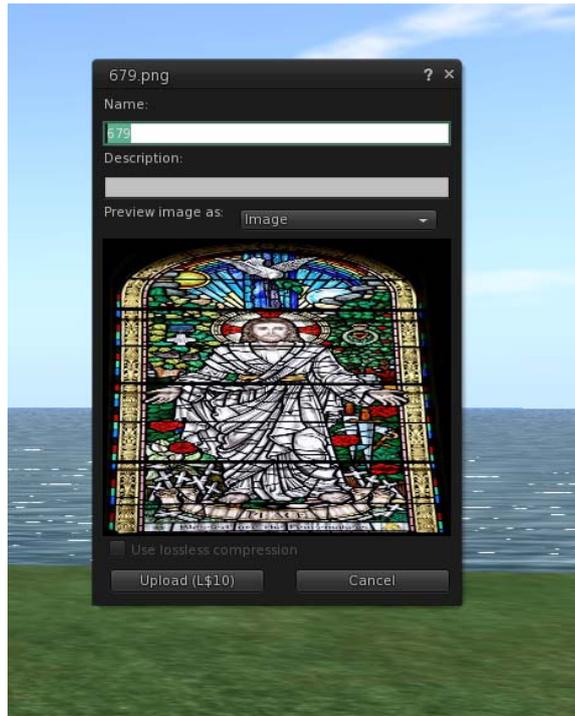Figure 57: Copying of photograph into editing software, optimization and exporting

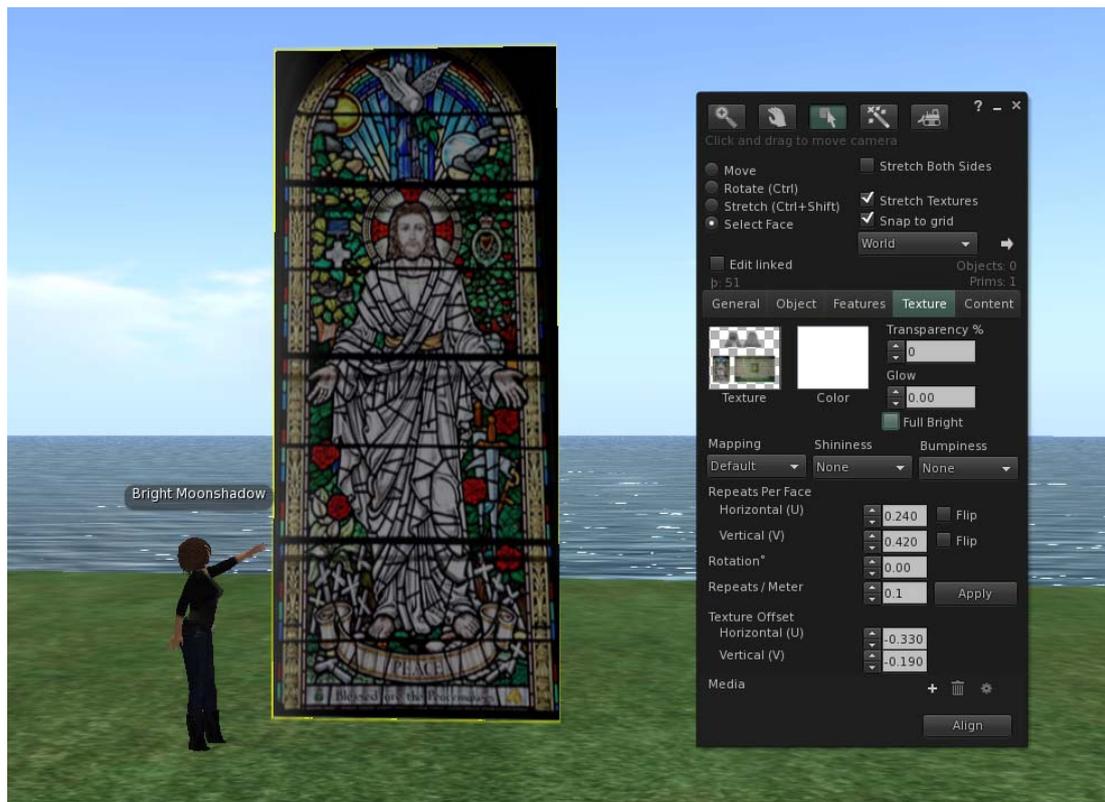Figure 58: Importing of optimised texture into Second Life

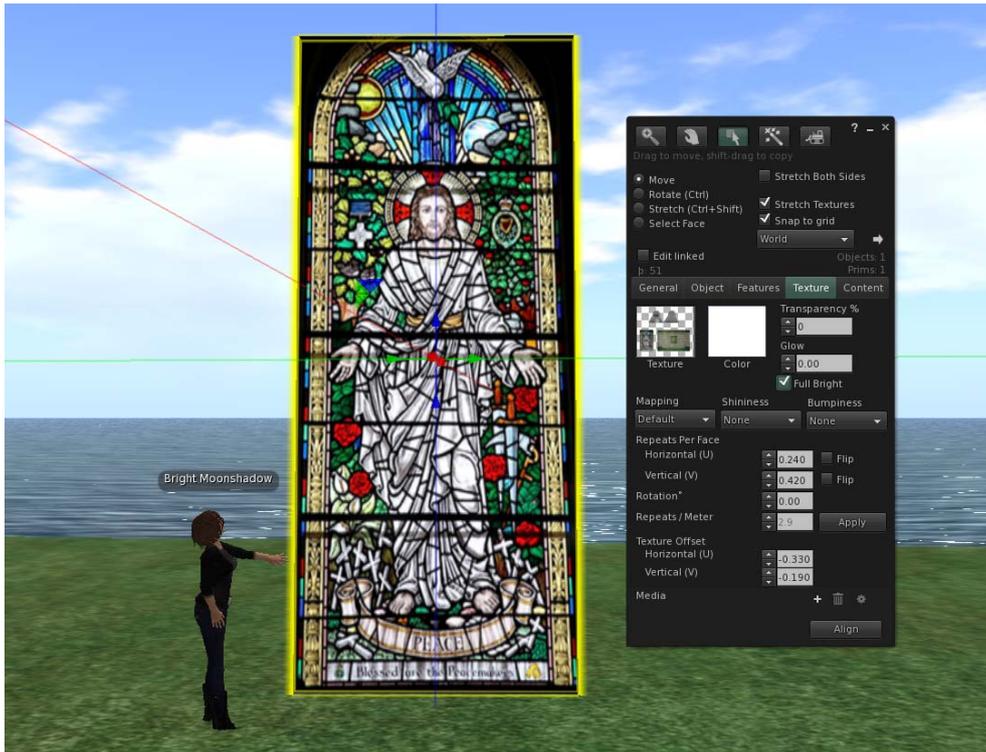Figure 59: Application of prim onto front and back facing prim

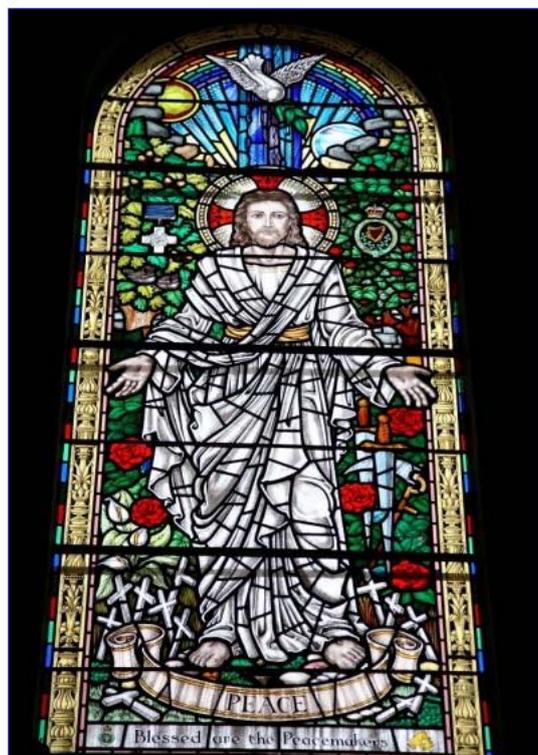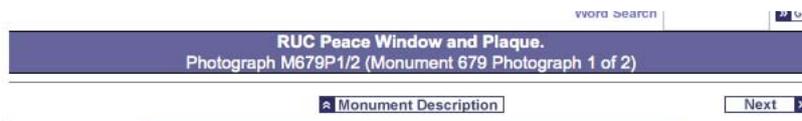Figure 60: Glow feature applied to give effect of brightness
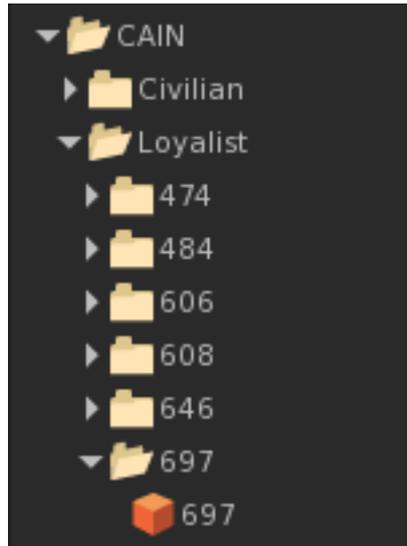

Figure 60: Actual memorial

Figure 61: Object given memorial name (from CAIN) placed in specific folder under the specific category (Loyalist)