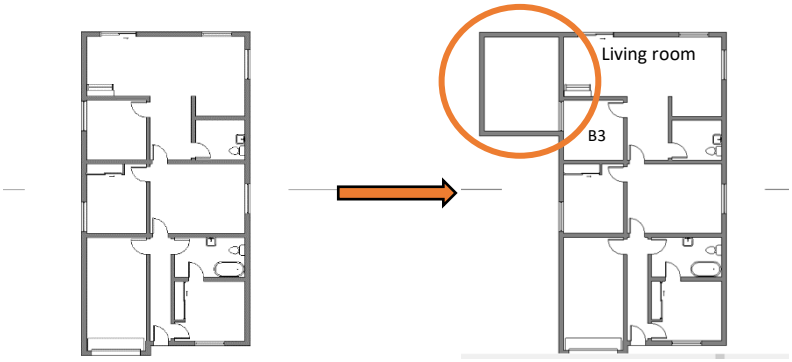
Part 1 – Steps of construction

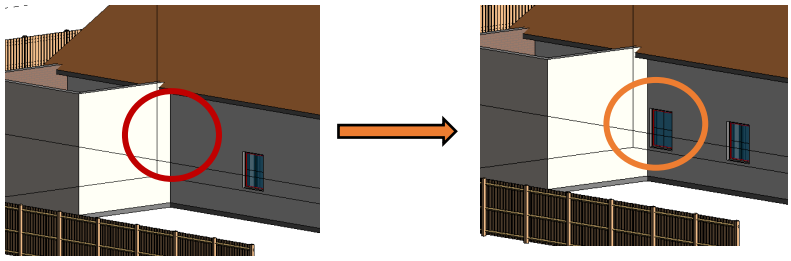
Annotations of the development and modifications to the house

1. Planning



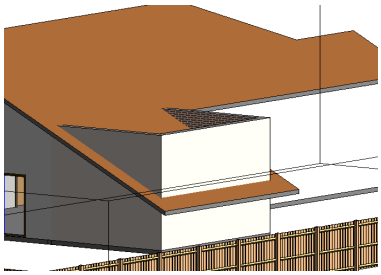
As per the criteria of the modification, an additional entertainment room is built then attached to the main building from the open living room space.

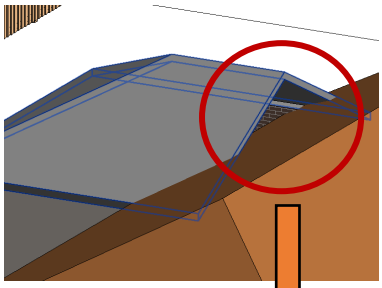
An existing window is removed as it wasn't suitable for the privacy of the entertainment room. Instead, a new window is placed near the outer corner of the entertainment room wall as it is essential of a bedroom to receive natural light and fresh air.



before *After*

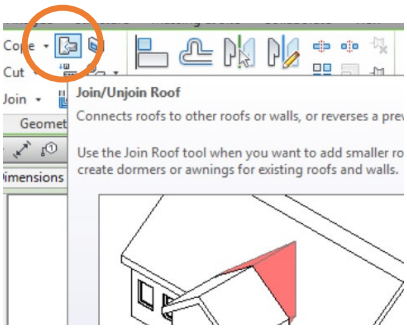
2. Problem – The roof

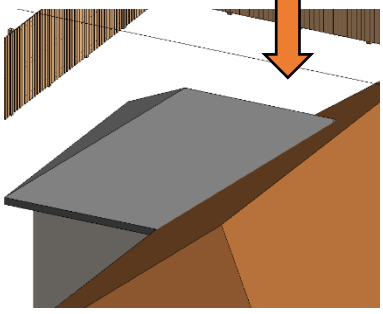




As seen, there was a bit of an issue modify the roof. It was looking very odd and there was a hole, so we have to find ways to connect the roof together from the entertainment room to the main roof of the building.

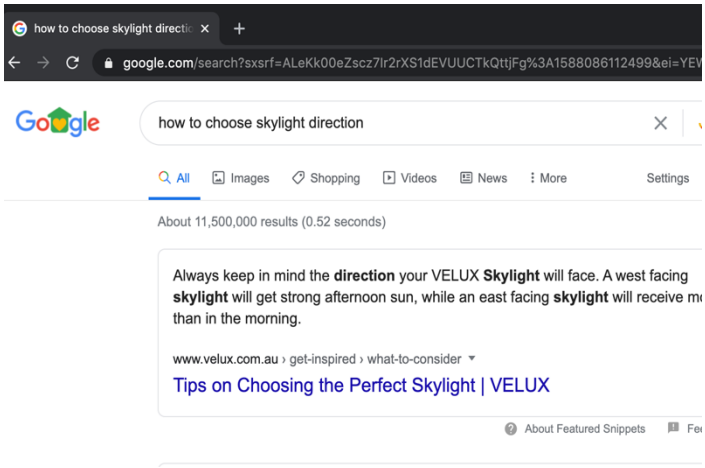
Solution

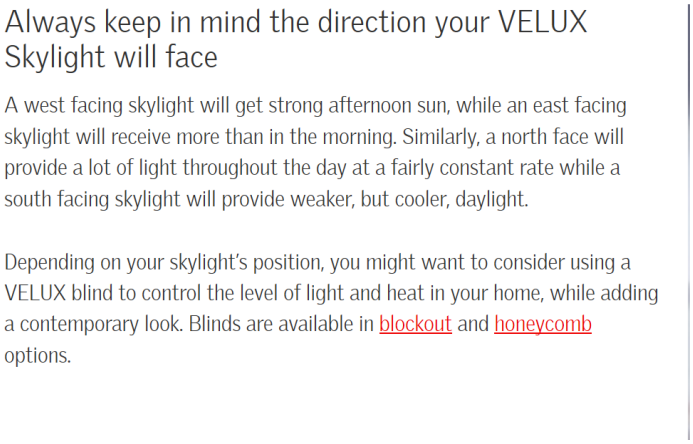




As for the solution, I did some research and end up using the Join/Unjoin Roof tool to connect the two roofs together. Now, the new roof is no longer left out.

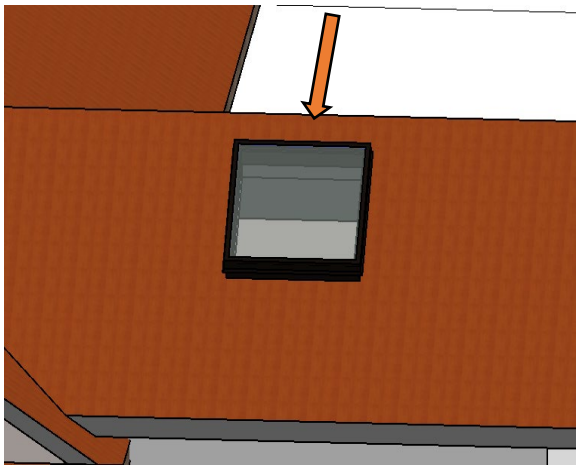
3. Skylights Research



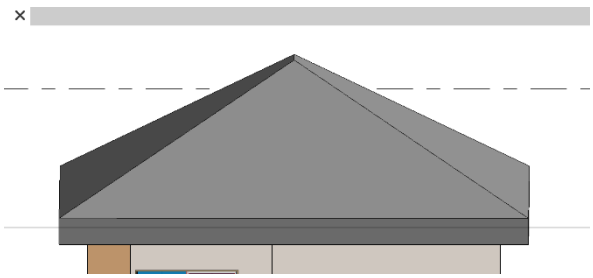


As skylight is a needed natural light for the entertainment room. I have decided to do some research about the benefits of putting up skylight and the direction for which it is facing. I've learnt the benefits given from each direction, so I decided to put up a skylight facing the north because it provides a lot of light throughout the day at a fairly constant rate. I've also learnt that the perfect size of a skylight should be around 10% the dimension of the room. c

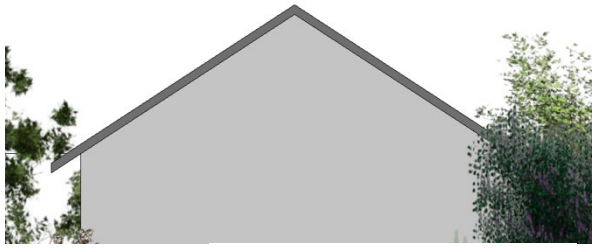
Skylight facing north



4. Roof Comparison:



Hip Roof



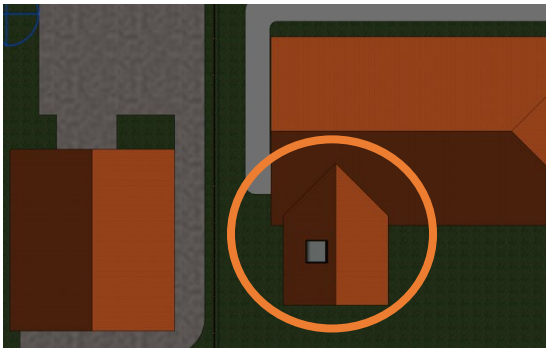
Gable Roof

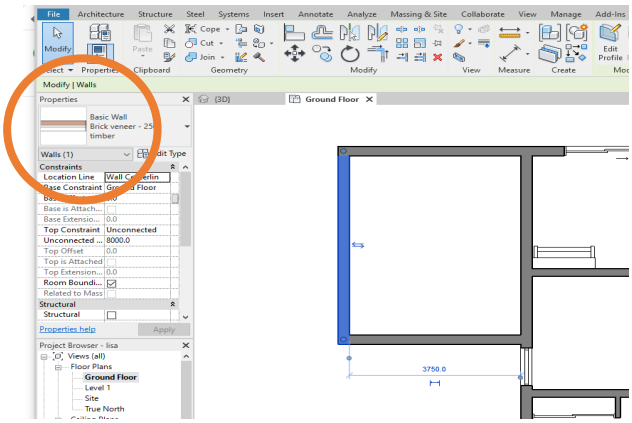
As suggested for the granny flat's roof, there are two choices of roof.

- A **hip roof** slopes on all sides, usually four, and results in a pyramidal shape. They are very sturdy and come in a variety of styles.
  - expect to pay $8 to $12 per sq. foot or $80 to $120 per square installed on a standard sized single-story home.
- A **gable roof** slopes on two sides and connects to the specialised walls known as **gables.**

Financially, **Hip roofs** are more expensive to build than **gable roof** because it's a more complex design that requires more building materials.

5. <u>Using the same material to match</u>

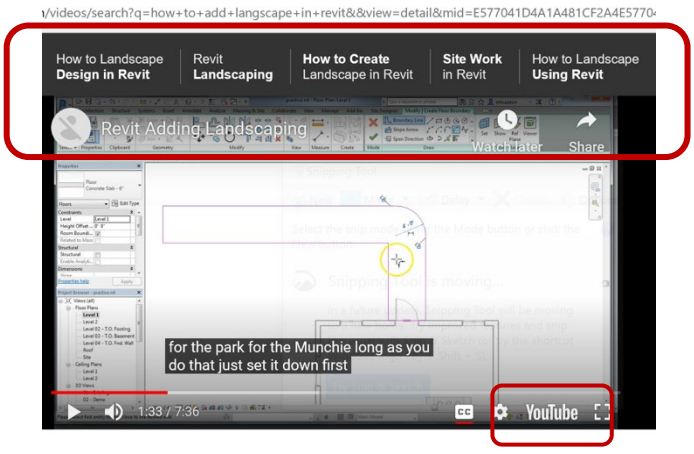




As we modify the house by adding an entertainment room in, it will overall have a better appealing if we use the same material such as the roof and wall thickness, and paint as it matches the main building.

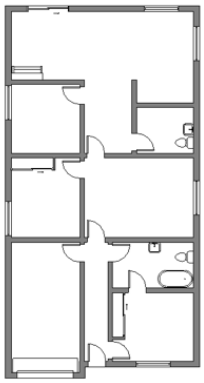
6. <u>Developing new skills:</u>

As it is required to add landscape to the modification for an overall aesthetic appeal, I have to do some research by watching Youtube videos on how to add landscape in Revit. I followed the tutorial and ended up placing some component such as certain bushes, grass, trees and flower where best suited. I have never added landscape on Revit before, and by doing so, give me new useful skills in this editing software.



7. Final product: Comparison of Before and After

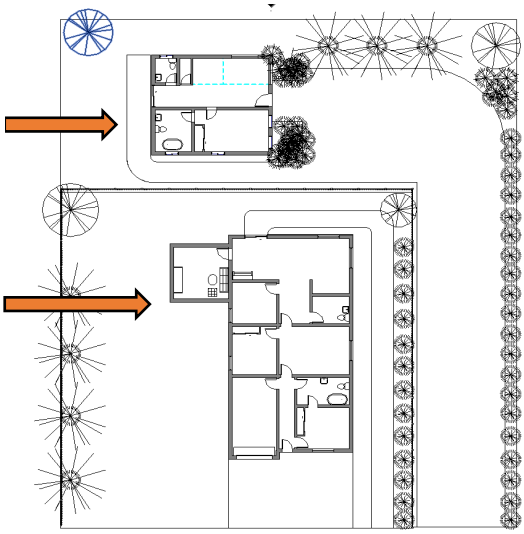
Original floor plan



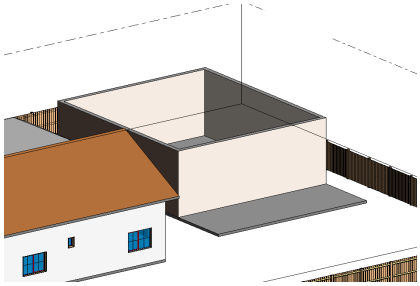
Modified floor plan

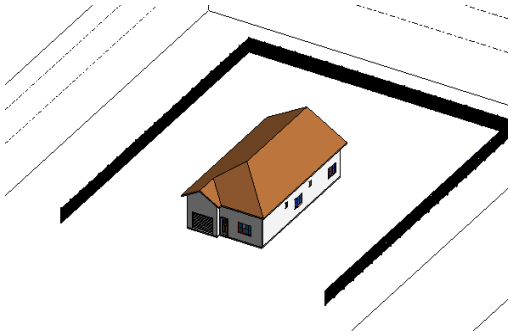
Separate Granny flat with a fence divided from the main

New entertainment room attached to the main building



Process of building Granny Flat





Final product at different directional views