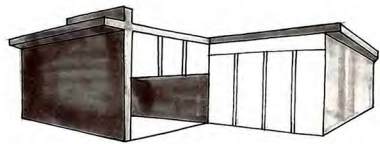


DEVELOPMENT 2



After doing this concept I have realized that I prefer less larger glass panels than more smaller glass panels. This is because it gives the building a more simplistic appearance. The repetition of the three glass panels makes the building appear tall and slender.



Shear wall creates a visually strong structure

In this concept I experimented with form again. I decided to go back to the original 'V' shaped design. This is because I think it offers more privacy and seclusion for the users. The area under the 'folding' level is very multifunctional as it could be used for an outdoor area, carparks etc. This idea of multiple functions is very sustainable.



In this concept I rearranged some windows and placed them in areas where they would capture the most sunlight. I also enhanced the design's appearance by adding a shear wall. This adds interest to the design and also contributes to the idea of a more secluded environment for the users of the senior common room.

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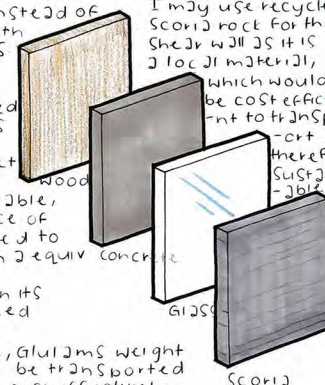


- Glulam beams can be used instead of steel in a building structure, with the following distinct advantages

- * Glulam, like all timber possesses insulation qualities so when used within a building structure it helps eliminate the thermal bridge between structure and sub structure.
- * Glulam is a recognized renewable, environmentally friendly resource of material, due to the energy used to produce it is six times less than a equivalent strength steel beam.
- * Glulam is pleasing to the eye in its natural state and does not need cladding like steel.
- * Compared to steel or concrete, glulam's weight is far lower, thus enabling it to be transported and erected cheaper and more cost effectively.
- * Glulam is low maintenance as it does not rust or corrode. Glulam will not buckle or distort in response to temperature change.

These reasons above are why I have decided to use timber / glulam frames for my design's structure as it is the most sustainable option.

MATERIALS



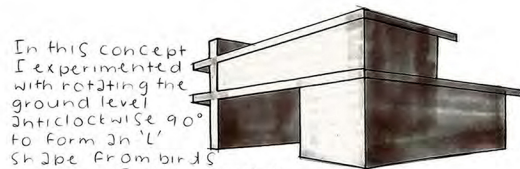
I may use recycled scoria rock for the shear wall as it is a local material, which would be cost effective to transport.

I have decided to do a combination of wood (NZ timber) and concrete for the cladding of my building. This is because timber is very sustainable as it is produced in New Zealand.

Concrete is not very sustainable to produce however builds durable, long lasting structures that will not rust, rot or burn therefore making concrete a sustainable material in the long term. Homes built with concrete walls, foundations and floors are highly energy efficient because they take advantage of concrete's inherent thermal mass or ability to absorb and retain heat. Light coloured concrete absorbs less heat and reflects more solar radiation than dark materials reducing air conditioning demands in summer. Concrete can be produced in the quantities needed for each project, reducing waste.

I will use double-glazed windows in my design as they reduce heat loss through windows by up to 50% minimizing the need for insulation devices.

DEVELOPMENT



In this concept I experimented with rotating the ground level anticlockwise 90° to form an 'L' shape from birds eye view. This creates a secluded environment for the users of the senior common room where potentially a deck could be placed.

This two level concept occupies less of the land which allows more space for greenery which is a very sustainable decision.

The repetition of the two large overhanging roofs creates a strong structure and also makes the building appear larger.

I think if this concept were to have more windows it would enhance the building's appearance and increase its overall sustainability level as windows are very cost efficient. This is because they capture a lot of light and heat.

In this concept I experimented with the shape again and formed a 'V' shape from birds eye view. This gives a more open-plan layout. The use of straight, strong lines and geometric shapes makes the building aesthetically pleasing. The vertical and horizontal lines contrast with each other to form a very sleek and slender appearance.



In this concept I have developed the placement of windows. I have used multiple panels of glass windows. So in the next concept I will experiment with a more simplistic style of windows.

Other student work submitted has not been included in this exemplar