

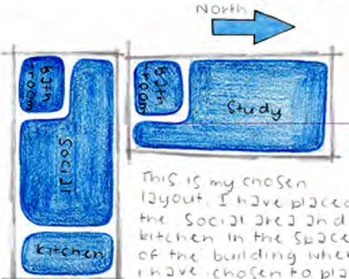
LAYOUT

2



In this layout the ground floor is very crowded resulting in each area being very small. However, the first floor is only being used for 2 social areas.

I am going to experiment with placing other utilities on the 1st floor which will also make the ground floor less crowded.



I don't think the 1st floor is the best place for a kitchen. This is because it will most likely be a utility people use the most so it is inconvenient for it to be upstairs.

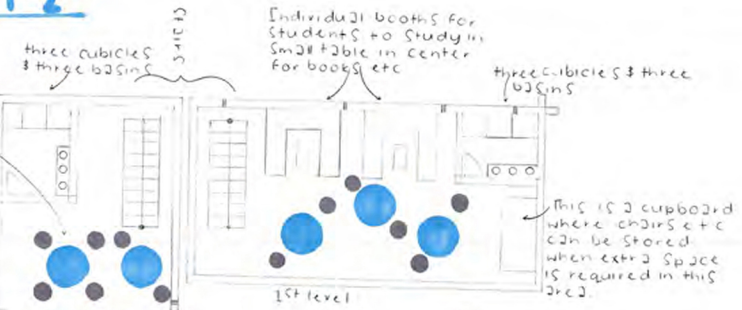
The ground floor is definitely the best position for a social area as it is where everyone will enter the building.

The south-east side of the building corrects most of the days sun. Sunlight is not required for a bathroom so this utility should be moved elsewhere and replaced with a more open plan area which can take advantage of the sun.

This layout is good. It may be more convenient if there were a bathroom on each level so that students using the ground level will not have to travel upstairs, which may disturb the students studying.

LAYOUT 2

Observed in previous SCR students like circle tables - easier to interact. This is the main entrance to the senior common room. These doors have multiple ways of functioning they can either open close like a standard door or they can work as bi-fold doors that slide apart to create a larger entrance and better indoor/outdoor flow.



This is the kitchen, which is formed in an 'L' shape. This particular shape was chosen after considering the comments made by year 13's using the previous senior common room. The kitchen is very small and crowded. We need a larger kitchen space because only 3 of us can fit in the kitchen at a time, which is not ideal. I made sure this was one of the users' priorities. I placed 3 bar stools around the kitchen bench as an extra eating space or where students can easily interact with people using the kitchen.

Large 'L' shaped couch for students to sit on and socialize.

Ground level

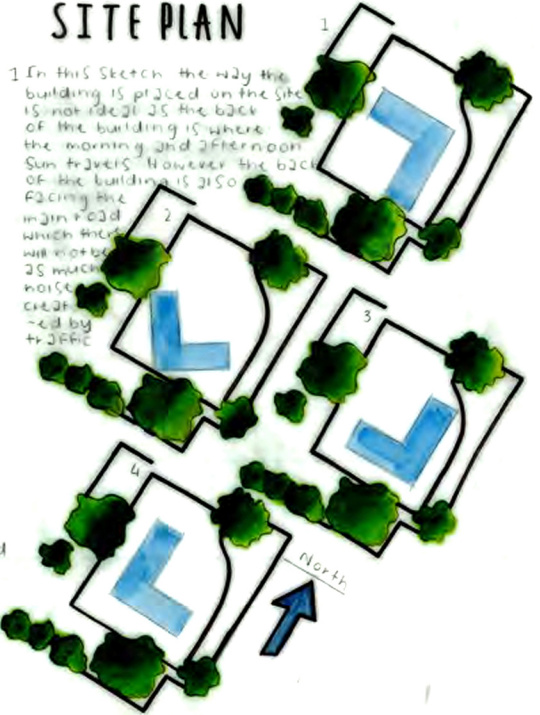
SITE PLAN



2 The way the building is placed on the site is not ideal either it would not be very easily accessed by the students as it is blocking the current pathways leading to the site. However, it is in a position that would collect both the morning and afternoon sun.

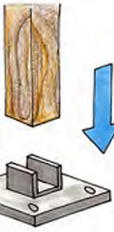
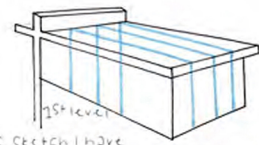
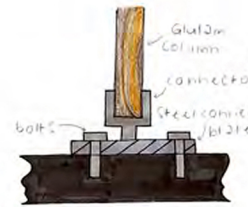
3 If the building were placed on the site like this, it would be very easily accessed by students using the facility however it is not very secluded from the school. It will also not collect the afternoon or morning sun.

4 I chose this way of placing the senior common room as it can be easily accessed by the users. The open area is under the direct sun path allowing it to capture both the morning and afternoon sun. It is private and secluded from the rest of the school and the existing trees located on the east side of the site will block any noise from traffic on the main road.



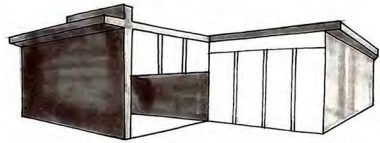
2

STRUCTURE



I have kept the 1st level beams in the same direction however I have changed the ground level beam direction. This way the beams are not visible from the outside. The glulam/ timber beams are only visible from the interior of the building. I feel this adds an element of interest to the inside of the building.

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 'L' 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, carpark etc. This idea of 'multiple functions' is very sustainable.



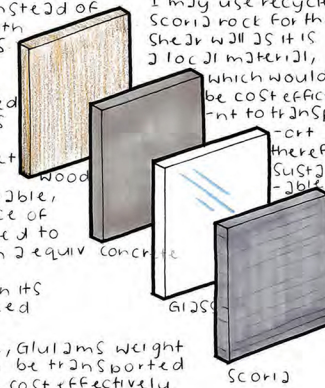
In this concept I rearranged some windows and placed them in areas where they would capture the most sunlight. I also enhanced the design's appearance by adding a shear wall. This adds interest to the design and also contributes to the idea of a more secluded environment for the users of the senior common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



MATERIALS

- 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.



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

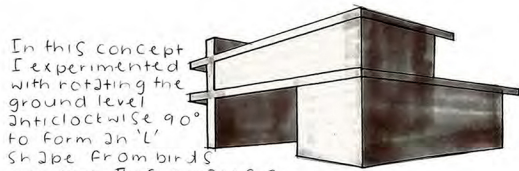
I have decided to do a combination of wood (NZ timber) and concrete for the cladding of my building. This is because timber is very sustainable as it is produced in New Zealand.

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 reflect 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.

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.

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