National Certificate of Educational Achievement
TAUMATA MĀTAURANGA Ā-MOTU KUA TAEA

Exemplar for Internal Achievement Standard

Design and Visual Communication Level 2

This exemplar supports assessment against:

Achievement Standard 91341

Develop a spatial design through graphics practice

An annotated exemplar is an extract of student evidence, with a commentary, to explain key aspects of the standard. It assists teachers to make assessment judgements at the grade boundaries.

New Zealand Qualifications Authority

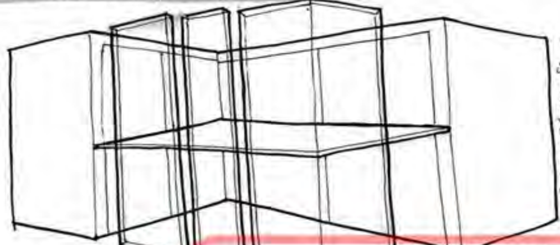
To support internal assessment

	Grade Boundary: Low Excellence
1.	For Excellence, the student needs to effectively develop a spatial design through graphics practice. This involves reviewing and refining well-considered design ideas that integrate spatial design knowledge throughout the development. This student has effectively developed a spatial design for a senior common room that demonstrates the integration of design tools, technical knowledge and visual communication techniques (see Explanatory Note 4). An understanding of Minimalism has been integrated throughout the design ideas (1) (2) and (3). Well considered design ideas, i.e. ideas that are linked together effectively, are starting to be evidenced in this portfolio. There is also evidence of the design ideas being reviewed and extended throughout the design process, to move the ideas to a final solution. There is clear evidence of the integration of technical knowledge (4) and visual communication techniques (5) throughout the submission. For a more secure Excellence, the student could strengthen the visual communication skills used in the submission to show the well-considered design ideas required at this level.

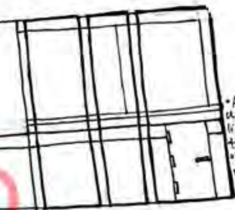
Student 1 Page 1: Low Excellence

NZQA Intended for teacher use only

How to make the building visually appealing?



• I have chosen this design because it has a strong minimalist look due to the use of straight lines and it also has potential to be developed into a visually appealing senior common room. Since the use of vertical lines on the glass panels that stretch over 2 stories offer an interesting look by creating pattern and repetition, capturing the eye. I will work around this concept of my design to aim to visually enhance the rest of the building while meeting the minimalist style.



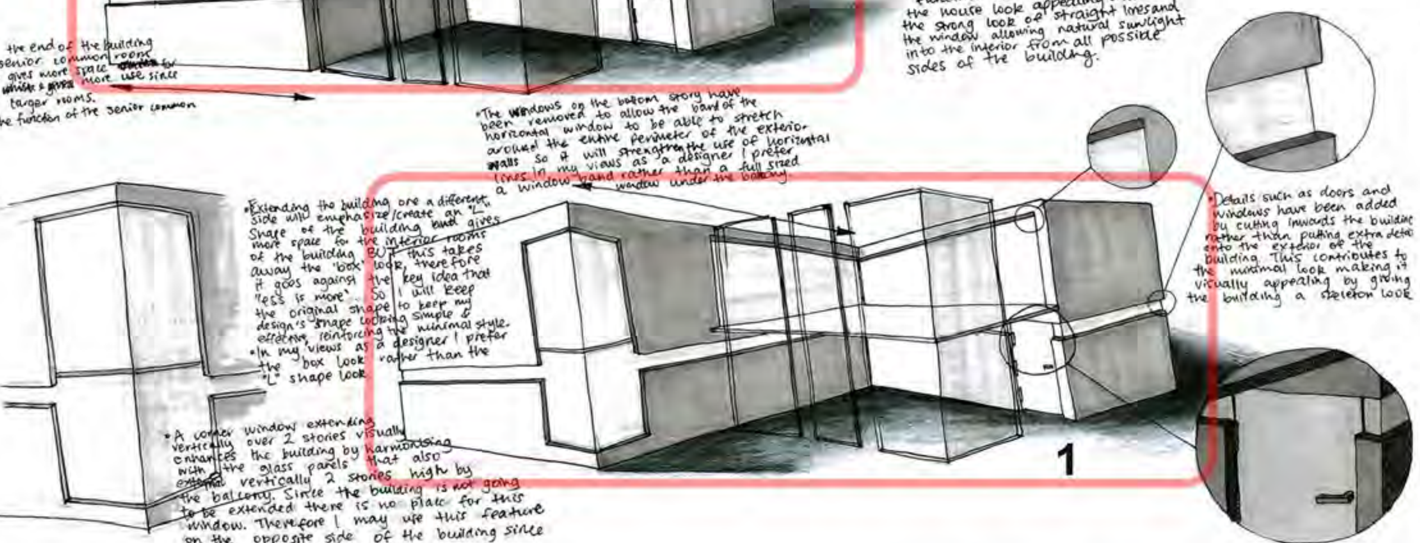
• A door has been added in order for the economical use of the building by providing user friendliness allowing access into the interior of the building.
• By making the door a glass material it will harmonise with the windows and glass panels visually enhancing the design

1

By adding a window horizontally cutting through the building visually enhances the look of the building by reinforcing the concepts of straight lines contributing to the minimalist style. It also uses the technique that 'detail meets function' with the window making the house look appealing with the strong look of straight lines and the window allowing natural sunlight into the interior from all possible sides of the building.

• By extending the end of the building makes the senior common room longer which gives more space for the interior more use since there can be larger rooms.
• This benefits the function of the senior common room.

• The windows on the bottom story have been removed to allow the band of the horizontal window to be able to stretch around the entire perimeter of the exterior walls so it will strengthen the use of horizontal lines. In my views as a designer I prefer a window band rather than a full sized window under the balcony.



• Extending the building one a different side will emphasize/create an "L" shape of the building and gives more space for the interior rooms of the building BUT this takes away the 'box' look, therefore it goes against the key idea that "less is more". So I will keep the original shape to keep my design's shape looking simple & effective, reinforcing the minimal style.
• In my views as a designer I prefer the "box" look rather than the "L" shape look.

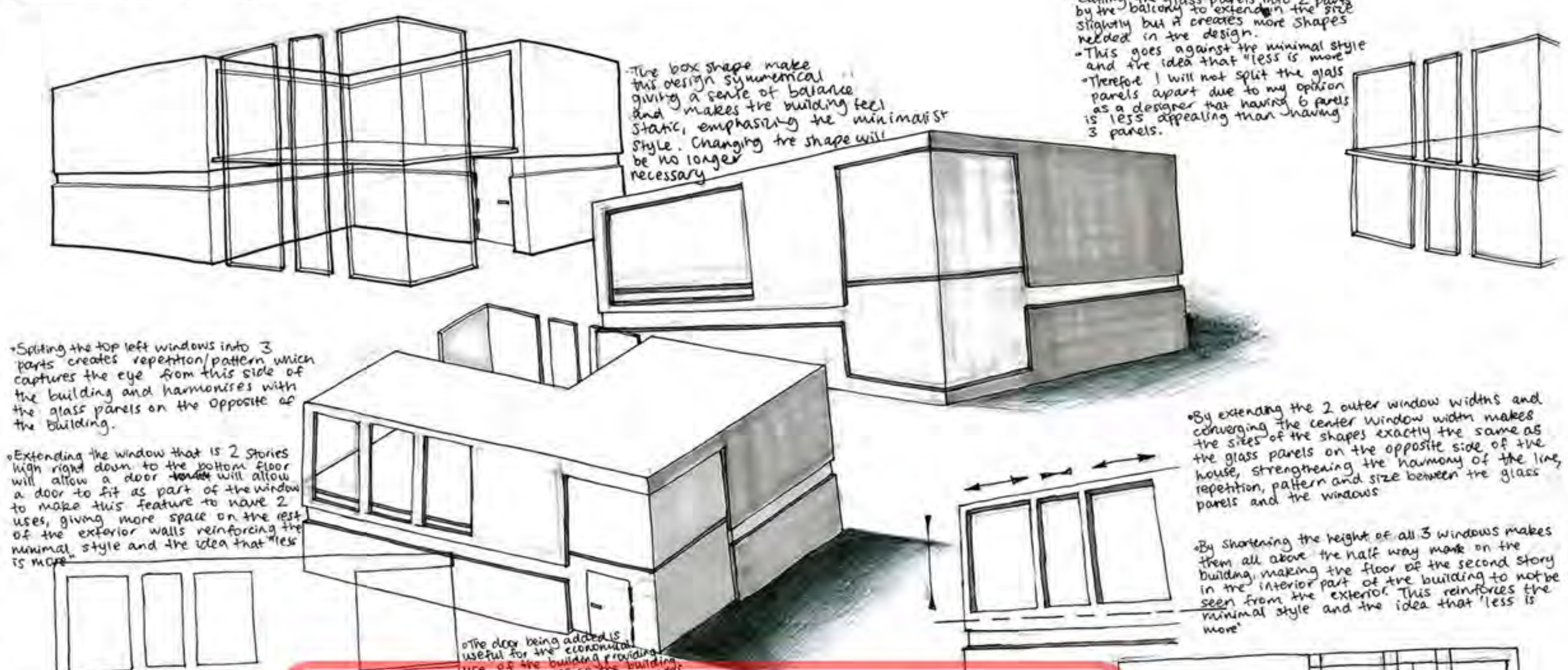
• Details such as doors and windows have been added by cutting inwards the building rather than putting extra details onto the exterior of the building. This contributes to the minimal look making it visually appealing by giving the building a skeleton look

1

• A corner window extending vertically over 2 stories visually enhances the building by harmonising with the glass panels that also extend vertically 2 stories high by the balcony. Since the building is not going to be extended there is no place for this window. Therefore I may use this feature on the opposite side of the building since it is an effective concept.

DESIGN DEVELOPMENT

How to make the building visually appealling?



- The box shape make this design symmetrical giving a sense of balance and makes the building feel static, emphasizing the minimalist style. Changing the shape will be no longer necessary

• Cutting the glass panels into 2 parts by the balcony to extend in the size slightly but it creates more shapes needed in the design.
• This goes against the minimal style and the idea that "less is more"
• Therefore I will not split the glass panels apart due to my opinion as a designer that having 6 panels is less appealing than having 3 panels.

• Spliting the top left windows into 3 parts creates repetition/pattern which captures the eye from this side of the building and harmonises with the glass panels on the opposite of the building.

• Extending the window that is 2 stories high right down to the bottom floor will allow a door to fit as part of the window to make this feature to have 2 uses, giving more space on the rest of the exterior walls reinforcing the minimal style and the idea that "less is more"

• By extending the 2 outer window widths and converging the center window width makes the sizes of the shapes exactly the same as the glass panels on the opposite side of the house, strengthening the harmony of the line, repetition, pattern and size between the glass panels and the windows

• By shortening the height of all 3 windows makes them all above the half way mark on the building, making the floor of the second story in the interior part of the building to not be seen from the exterior. This reinforces the minimal style and the idea that 'less is more'

• The door being added is useful for the economical use of the building providing user friendliness so the building can be accessed from 2 sides of the building instead of only one side.

2

• No other walls have been cut away of extended for the sake of keeping the building's form static with having not to much movement, reinforcing the simple and effective look due to the minimalist style, and to my views as a designer to keep the 'box' shape.

Adding a deck strengthens the efficiancy of the building with the use of unused space of the balcony.
• A deck has been added underneath the balcony to create a space for the students that are a part of cultural, dance or drama groups to practise in a space of the senior common room away from other students wanting to relax/study inside the building. This also visually enhances the design by creating repetition of straight horizontal lines, reinforcing the minimal style by the use of straight lines and the idea that

DESIGN DEVELOPMENT

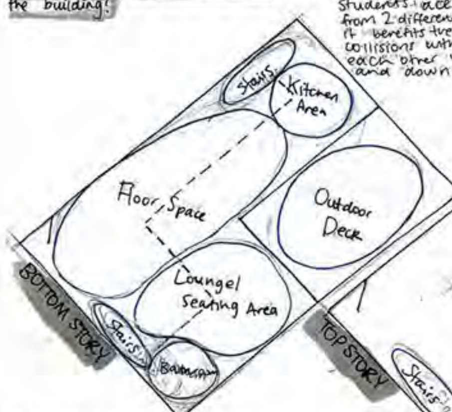
How will the rooms be set out inside the building?

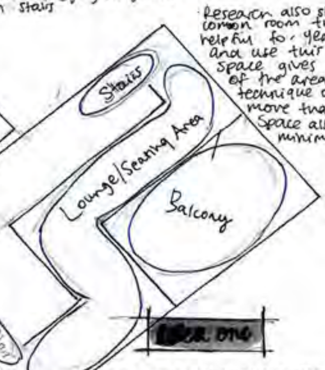
• Having 2 sets of stairs will allow students access to the upstairs area from 2 different sides of the room so it benefits the room's use by avoiding collisions with students bumping into each other while trying to get up and down stairs

• Research of the current senior common room has shown having 2 stairs is effective and incooperates the minimalist idea on society with less stress in the simple confrenments within a room

Research also shows that in the current senior common room the large floor space is very helpful for year 13s to practice dance etc. and use this space effectively. Leaving space gives versitility in the function of the area which is a minimalist technique of concepts having more than 1 function. Space also emphasizes the minimalist style.

The kitchen in the senior common room has been moved to allow a study area since students requested a study space for the new senior common room. It has been a larger size than in the current senior common room as research shows the original kitchen size to be too small and students find it hard to acess. Also it is big enough to include an eating area which students requested.



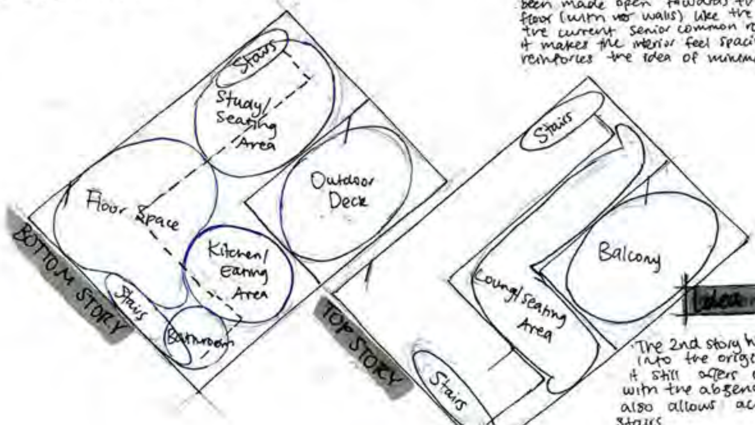


• A bad point for the current senior common room is that students complain about the kitchen being too small. In order to meet their values the kitchen will need to be larger to be able to provide a table/eating area as well as enough space to move around the kitchen area

• A study area will need to be added as students have requested a study space for the new senior common room (shown in research)

• The lounge and seating areas have been arranged on the bottom and top stories facing the direction of north/east where the sun shines during the day. This is effective as students prefer to sit in a warm area in sunlight.
• The upstairs lounge/seating area has been made open towards the bottom floor (with no walls) like the space in the current senior common room as it makes the interior feel spacious which reinforces the idea of minimalism

Making the seating area upstairs only one corner of the space is not as effective as it will not be exposed to sunlight the entire day. This also makes the stairs only give access to the deck which will make the function of stairs unuseful in winter when it is colder and students wont use the balcony. When the lounge stretches around the deck it will make the function of stairs effective through summer/winter as students will still use the lounge/seating area in the interior

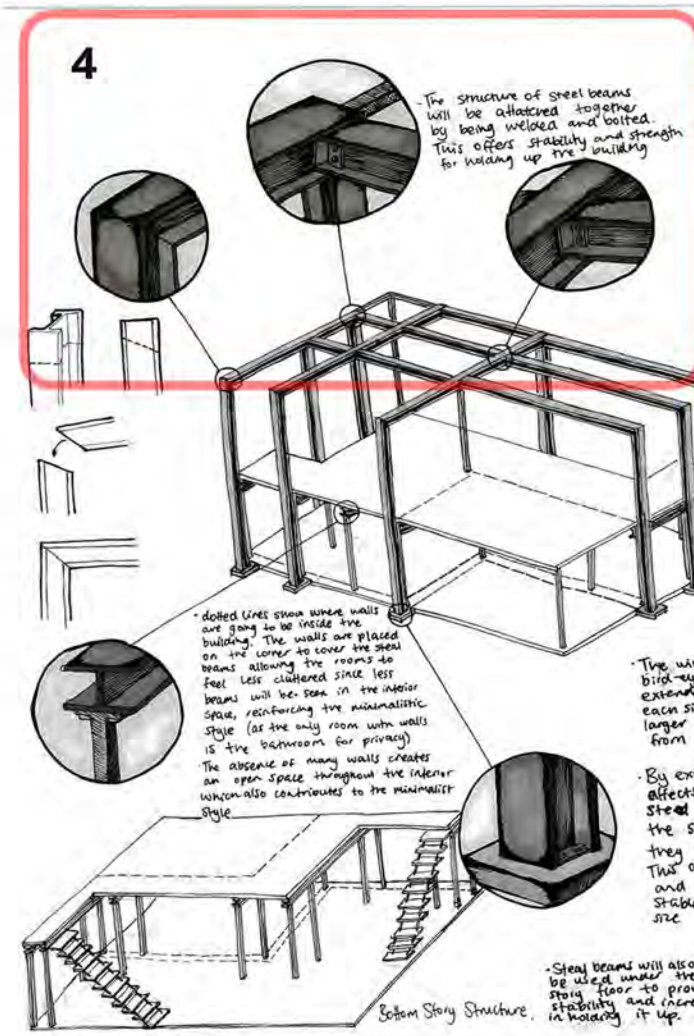


• The 2nd story has gone back into the original layout as it still offers an open space with the absence of walls and also allows acess/use of BOTH stairs

• A window has been added to allow more sunlight to reach into the bottom story where the kitchen in the morning as research shows sun comes from the east side

4

How will the structure of the building be effective in holding it up?

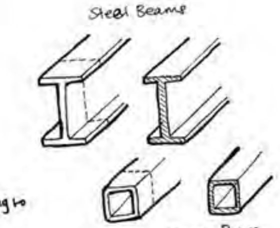


- The structure of steel beams will be attached together by being welded and bolted. This offers stability and strength for holding up the building

• dotted lines show where walls are going to be inside the building. The walls are placed on the corner to cover the steal beams allowing the rooms to feel less cluttered since less beams will be seen in the interior space, reinforcing the minimalistic style (as the only room with walls is the bathroom for privacy)
The absence of many walls creates an open space throughout the interior which also contributes to the minimalist style

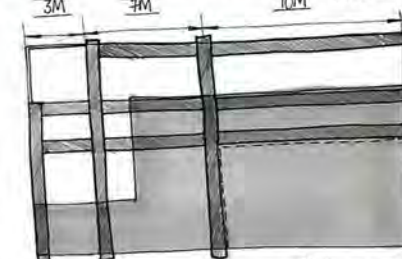
Bottom Story Structure

• Steal beams will also be used under the 2nd story floor to provide stability and increase strength in holding it up.



- The window is too small and too narrow on the building so it would be enlarged this will make it more eye catching.

• Smaller bars have been used for the corner (top left of this birds-eye view) so they are more discretely seen through the window contributing to the minimalist style

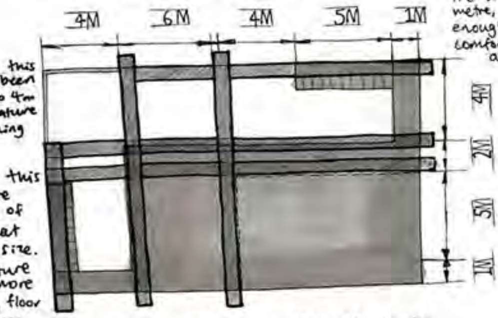


• Steal beams have been used for the structure as they are strong and suitable for 2 story buildings rather than just using metal bars
• Metal bars are used for other parts of the structure where less strength is required
• Stairs need to be shown in structure

Birds-eye views of the structure

• The window on the top left corner of this birds-eye view of the structure has been extended from 3m by 3m to 4m to 4m each side which will make this feature larger and therefore more eye catching from the exterior view.

• By extending the top left window this affects the placing/position of the steel frames and also the size of the second story floor area so that they match around this window size. This offers more order to the structure and also makes the structure more stable by matching up the frames, floor size and window size on left corner.



• The widths of stairs and the walkway is 1 metre, allowing enough room to comfortably walk across, and also offering more of an open space between the bottom story and the second story.

• To provide more strength/stability to the building in holding the 2nd story up I will need to make the steal frames attach to it by going through the floors instead of just going around them which will offer a much more stable structure.

How will materials contribute to the building?

- Pure concrete has been used for the walls, they create an unfinished look by using raw materials. It goes by the minimalist technique that designers such as Tadao Ando and John Pawson use. The material is also suitable as concrete it able to withstand harsh weather in Aucklands environment of rainy/windy weather as it is a strong material

- The ceiling and walls are bolted onto the structure many bolts will provide stability and connnote to a raw look that as they will be able to be seen, which gives a skeleton look, which is a minimal tennique

- The glass windows will be slightly frosted providing privacy for the students which is an important value for them to have in the senior common room. They are still effective with being able to let natural sunlight inside

- The glass panels will remain fully transparent to allow the balcony to be viewed from the exterior

- The building will be made 6m high as the stairs is half the height, going up at a 45° angle extending 6M which makes the building tall- stand out in the school environment

- There needs to be a way to be able to open the top story windows to allow acess to the balcony

- The door has been made no longer being attatched to the horizontal window as that makes the door too tall and un-proportional to the function of the back door to be over 3M high so it will be now around 2M

- By just using a small amount of raw materials - wood, concrete and glass - that gives the slender look and features the minimal style that 'less is more'

- The glass panels will be bolted down just like the concrete panels as it provides stability and will be seen from the exterior view making a raw, skeleton look - reinforcing the minimalist style

- The steel frames go through the 2nd story instead of being at around the flooring and go underground as the bottom to increase stability of the building's structure This is referred to as concrete foundation.
- The flooring will be cut to fit the shape of the steel beam in order for the beams to slide through the flooring.

- Window for the kitchen is made to be able to open to allow fresh air into the interior as research shows that girls complaining about the old building being too stuffy inside in summer.

- The windows have been made into branch sliders as it shows effective in the research of the current senior common room, allowing acess to the balcony and making the room feel open and spacious

- The concrete panel walls have been made darker because in with my values as a designer I prefer a darker shade to be more striking and bold it the environment to standout in the school

- The absence of bright colours emphasises a more simple and effective look; the darker grey colour and the dark brown colour is striking and makes the building stand out from the natural environment and industrial - continuing to the minimalist style

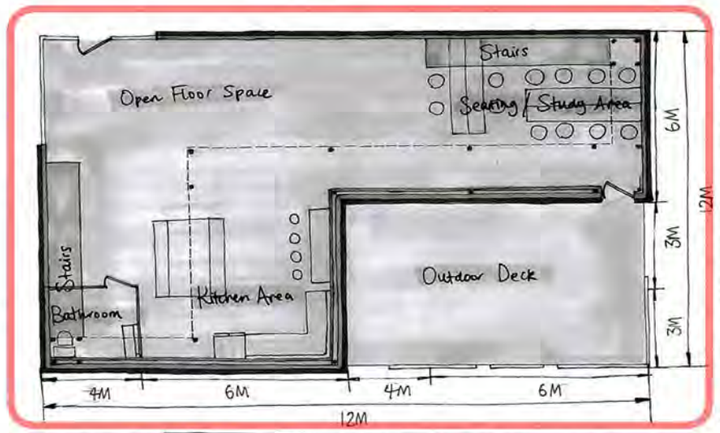
- The front door is made out of wood to harmonise with the other balcony on the opposite side, making the building visually appealing by creating repetition

- The absence of walls in the interior floor plan makes the room feel open/spacious giving a minimalist style of only using 'features' that are necessity to the building's design. The only walls inside the floor plan are used for the bathroom for privacy. It makes the room feel less cluttered and follows the minimalistic technique that 'less is more'

The area of the kitchen is 6m by 6m, it is a large proportion of the floor plan on the bottom story as it also includes an eating area for students. Research shows that students prefered a much larger kitchen area as it was too cluttered and they also wanted an eating space so the size of this area is efficient in meeting their values.

The bathroom area is 4m by 3m which is an ideal size, it is on the bottom story which makes it easy to access from students close to the senior common room needing to use it. It has been placed by the kitchen to make it effectively close by when student require it after leaning.

Having 2 sets of stairs allow the students acess to the upstairs 2nd story from the 2 different sides of the room so it benefits the rooms flow by avoiding collisions with the girls bumping into eachother while trying to get up and down stairs The stairs also save time in students having to walk to the other side of the room just to get upstairs since the floor plan is quite a large area



The seating/study area has been made 6m by 6m which is enough space for student to study in their break times. This meets the student's values of wanting an area to be able to study in peace. It is tucked away in the bottom story corner instead of in the center to allow students to focus in a quiet area away from the kitchen / bathroom.

With the balcony being 10m by 6m makes it a quarter of the size of the building, therefore it is a large proportion on the site. Research from the current senior common room shows that year 13s use the deck to study, or sit and lunch/interval very often to be in an outdoor area. It is where most students spend their time while using the senior common room. The large proportion of the balcony is an efficient size so many students can use this space at one.

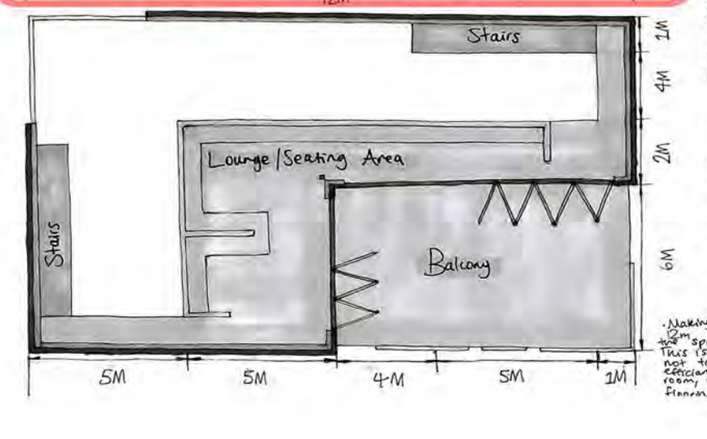
3

- The width of the stairs and walk way to the lounge/seating area on the 2nd story has been made 1 metre. This allows enough room to comfortably walk across and also offers more of an open space between the bottom story and the 2nd story since there are no walls

The width of the lounge and seating area next to the balcony is 2 metres which gives enough room for students to sit on a lounge going along it and students to walk along it at the same time.

- Branch sliders will open up the walls of the balcony just like in the current design of the senior common room as it shows efficiency in research - allowing acess to the balcony and ventilating the room and the seating/lounge area to feel open, spacious and larger

- Making the building measurements 20m by 12m gives an area of 240m² which meets the specification for the building's floor space. This is a suitable size as the building is not too narrow, nor too wide, making it efficient to arrange the kitchen, bathroom, living room, lounge, seating area and balcony in the flooring space.



Visual appeal
- The glass panels that stretch over 2 stories offer an interesting look by creating repention, capturing the eye. It follows the minimalist style by 'detail meeting function' as it is used as a safety barrier and wall around the balcony but still being visually appealing. It offers more than function which makes this an effective feature of the building.
- The box shape makes this design symmetrical giving a sense of balance and makes the building feel static emphasizing the minimalist style.

- The small amount of raw materials - wood, concrete and glass gives this design a naked and unfinished look that makes it slender, reinforcing the minimalistic style that 'less is more'

- The absence of bright colours emphasises a simple and effective look, the darker grey and brown colours/shades are bold and striking which makes the building contrast with the natural colours of the environment. It makes the building feel industrial and modern - contributing to the minimalist style

Environment
- By placing the side of the glass panels and balcony facing the north-east direction is effective as this is an eye catching feature, creating a positive aesthetic contribution to the school environment that can be seen by the publics view on Manukau Road (on the east side) where cars drive past on the way to and from New Market

- The sun starts shining from the east side, travels around to the north side by mid-day and through to the west side by the afternoon.
By placing the deck/balcony on the north-east side it will allow exposure to sunlight most of the day.
This will effectively be used by students to sit at lunch time or study during the day.

- Research shows that students students have much use out of the deck during lunch, interval and study breaks periods in the course of a sunny day, therefore makes the position of the building effective.

Size
- The measurements 20m by 12m gives an area of 240m² which meets the specification for the building's floor space. This is a suitable size as the building is not too narrow nor too wide, making it efficient to arrange the interior floor plan rooms such as the kitchen, bathroom, study area etc. This is shown on the final floor plan.

Spacing
The spacing of the rooms of this design match up with the exterior layout of materials/features. For example the kitchen has a window on the bottom story that opens to allow fresh air inside/natural sunlight to reach through and the balcony has branch sliders which slide and make the building feel spacious. More of the spacial planning has been mentioned in the final floor plan

Material / Structure
The frosted windows allow privacy for the year 13 students which is an important value for them stated in research of the old-current senior common room. They are still able to let sunlight inside which make them effective in function

The bolts are still able to be seen from the exterior which gives a skeleton look, reinforcing the minimalist style that 'less is more'

The metal bars are used to hold up the 2nd story and are also supported by steel beams which are suitable for building 2 story buildings up and withstand heavy weight like concrete.

- The steel frames are made for concrete foundation which meant they go underground to increase the building's stability

- Pure concrete is use for the walls as panels They create an unfinished look by using a raw material. It follows the minimalist technique that designers such as Tadao Ando and John Pawson use. The materia is also suitable as it is able to withstan Aucklands harsh weather of rain/wind.

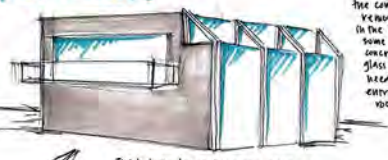
- The wood is made out of timber which is suitable for an indoor/outdoor environment It is strong and durable for the use of a flooring in the building.

Other student work was submitted but not included in this exemplar

	Grade Boundary: High Merit
2.	For Merit, the student needs to clearly develop a spatial design through graphics practice. This involves: • reviewing and refining design ideas that incorporate spatial design knowledge • making design judgements on relevant features of the design, in response to the brief, that inform the progression of design ideas. The student has designed a structure for a senior common room. This student has reviewed and refined design ideas, incorporating spatial design knowledge, with design judgements on the relevant features of the design. The visual ideas are supported by modelling and the exploration of ideas. There is clear progression through the development of the design ideas, with a dominant focus on the aesthetic aspects of the design (1). There is good integration of spatial design knowledge during the layout and design phase, where the decisions made are sound (2). To reach Excellence, the student could develop the form of the spatial design further, to more clearly show well-considered design ideas. Investigation of functional elements such as materials, interior spaces and flow (3) could also move this sample into the Excellence grade area. The integration of spatial design knowledge would also need to be strengthened.

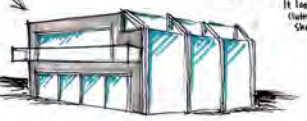
HOW TO MAKE BUILDING VISUALLY APPEALING?

DEVELOPMENT



The glass doors at the bottom of the common room have been removed. I wanted more contrast in the building so I removed some of the glass. Now the concrete looks bold because the glass wall and window. I need to think of an alternative entrance for the common room.

The balcony length has been shortened because it was too close to the steel columns. It looked messy and the area was cluttered so the length has been shortened.



The addition of a balcony adds interest to the left-hand side of the senior common room. Previously the side looked dull and plain - which is the opposite of high-tech architecture aesthetics. The immaterial (glass) theirs with the right hand side so the common room looks more balanced. Functionally speaking, the balcony means that the girls can relax on the balcony. The balcony could potentially be placed to face North so it can make a good use of the sunlight. If placed this way the balcony could be popular with students who want to get some fresh air and sunlight.

I chose to alter the steel columns shape. I made the columns more square to match the other steel columns on the right hand side of the building. I feel that this unifies the common room.

The steel columns can be seen from above as the bottom of the balcony is glass. This highlights the idea of high-tech architecture of visible structure.

This close up of one of the steel columns shows the sharp corner and flat shape. This will be made of steel.

I have added four steel columns to the balcony. This emphasises the exterior structural features that are commonly seen on high-tech buildings. The four columns are purposely similar to the right hand side of the building - this makes the side look balanced. The shadow of the columns also could provide shade for girls who are up on the balcony. I may need to adjust or refine them because it could feel claustrophobic and not as open as I originally intended.

Side View of Balcony

I decided that the previous balcony design was locked in. The columns above the balcony almost would eliminate the purpose of getting fresh air and sunlight out in the open. Having the steel columns underneath the balcony means that the space is not restricted. I may need to change the design in some way because it almost looks like it is part of a minimalist balcony.

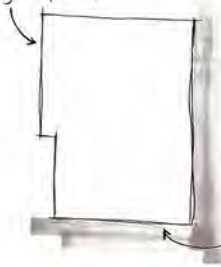
I decided to extend the steel columns so that they will extend from the building. I think this idea is more appropriate for my chosen architectural movement. This balcony design still keeps the structural look I intended for it to have, but it is open and true to my chosen movement. The flatting out columns add interest to an otherwise minimalist design.

1

The design at the moment has a rectangular base. I want to extend the overall area because it is fairly small at the moment. The senior common room needs to be fairly large as many students use it - not just year 13s, but cultural groups too.

I have changed the shape of the senior common room to look like this. The shape is overall longer than before and is more interesting than a plain rectangle. The corner of this new shape has ground to ceiling plain windows. This goes with the steel vertical steel columns.

balcony side of building



This is the base of the improved senior common room building. As well as being not too plain and big enough to house/fit students, the open space leaves room for placement of study areas, kitchen, bathroom etc.

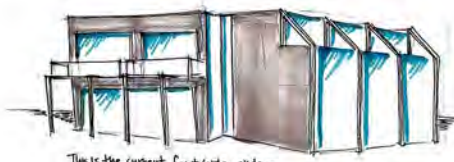
We now add the details onto the new shape. The balcony is placed further away from the steel columns on the right - so that the concrete wall is split the details apart. If they were closer I think that the building could look too busy.

glass (ground to ceiling) wall with steel detail

I placed another set of bi-fold/large doors onto the design. They will act as the main entrance, and look to the doors above them so many almost doors on the concrete wall because I want that to remain blank and non-descript.

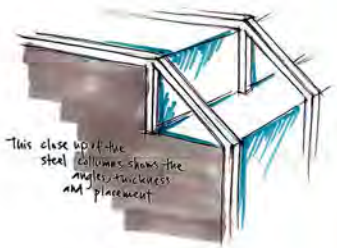
I have split the balcony into two. This was because the balcony would be too long and too minimalist. Practically speaking, the split means that inside the building there can now be two rooms within the block below the balcony. I've kept the steel column detail because I think it is true to my high-tech movement and I have obviously refined the design to a high standard which I am pleased with.

DEVELOPMENT CONTINUED



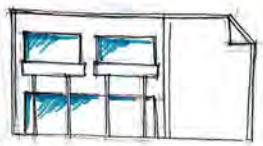
This is the correct front/side angle - after the refinements, reviewing and adjustments to the exterior

This is the other angle of the senior common room with the continuation of the steel columns over the roof.

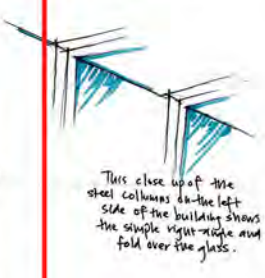


This close up of the steel columns shows the angles, thickness and placement

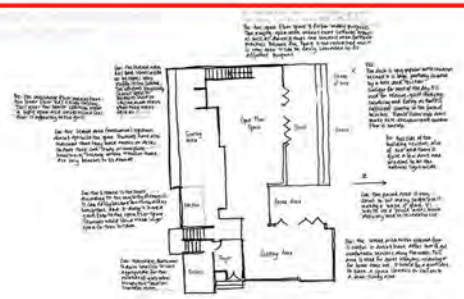
2



This is the front on view of the senior common room. I have made the steel columns run over the entire building so the structural detail flows better. The columns go over the roof and to the other side of the building - as the picture on the right top hand corner shows. I have made this feature very prominent because it makes my senior common room suited to my chosen architectural movement. I was inspired by the look of the Centre Pompidou, although I simplified the structural look and kept the basic concept of it.

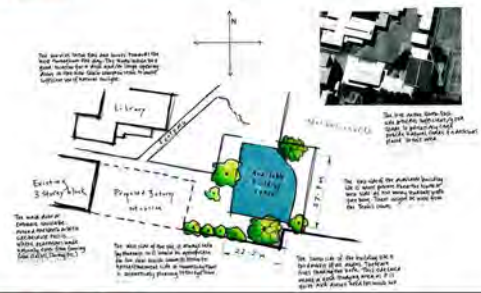


This close up of the steel columns on the left side of the building shows the simple right angle and fold over the glass.

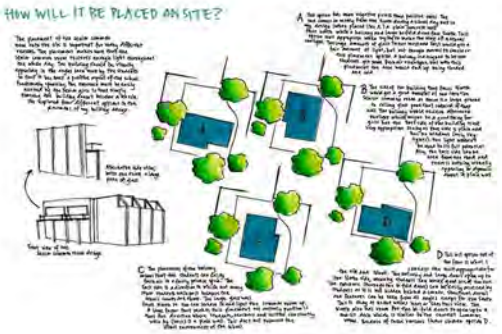


Existing GCR Scale 1:100

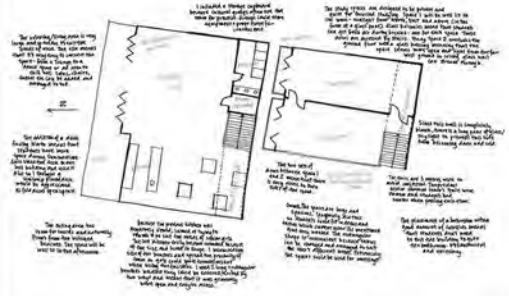
SITE ANALYSIS



HOW WILL IT BE PLACED ON SITE?



FINAL INTERIOR LAYOUT



HOW WILL SPACES BE ARRANGED?

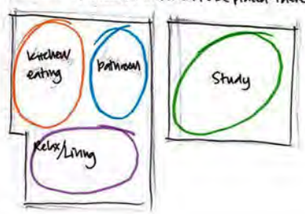
this floor plan shows the bottom floor which approximately measures 20m x 14m.

this is the mezzanine floor which will be accessed by a set of stairs. 12m x 14m.

Top: the current kitchen which is said to become easily crowded
Right: the open floor area that opens North to a sunny wooden deck.

To fit the purpose of the Senior Common Room, my design needs to have certain areas and spaces. Girls I spoke to mentioned that quiet studying areas are needed to prepare for exams, large open areas for relaxing/dance rehearsals would be useful as the current senior common room has an area like that which is often used. Practically speaking, girls would need a kitchen and bathroom. Students have said that the kitchen in the current building is used a lot but becomes crowded and hard to get around during lunchtimes. I will need to have a open plan and large kitchen space so students maximize use. Study areas should be large enough to house well spaced tables and possibly computers. I will also need to consider placement of areas and sunlight so my interior layout suit students needs as well as possible.

- I have used the mezzanine floor as a kitchen/eating area. This could work because then the food area is separate and students could head out to the balcony to eat lunch.
- the living area would get the afternoon sun but in the morning might prove to be dark
- I have made the study area fairly huge to accomodate girls who need to school work, it's placed near the computer room. I may need to rework this because the computer room is quite small as there is limited space.
- the bathroom doesn't need lots of light so placed it in the corner where there won't be much light - plus it can't be seen from the outside (it's not by glass windows).



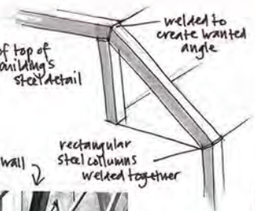
- I moved the kitchen/eating area as I realised that it was natural for this space to be near the living space. This also means that the study area is on its own floor. This is very suitable because it is more private, quiet and separate which will increase focus.
- I took away the computer room as there was no strong need for it. Currently girls are getting along fine without computers, and this site is near the library.
- The bathroom has been expanded because a lot of girls vacate this building so an appropriate number of cubicles will need to be placed there.

- I've split the study floor into two areas; this means that the 1st space will be more closed off and private as a wall will separate it from study space 2. The 2nd area will overlook the ground floor so might be noisier, making it a less serious study space. I thought it would be good for students to have a choice.
- I swapped the kitchen/eating area with the open relaxing area. The bi-folding doors will let in a lot of sun so the relaxing space can be warm and extend outdoors - similar to the current building.
- the bathroom is beside the relaxing area and not so close to the kitchen which would previously be a bad combination due to smells, hygiene etc.

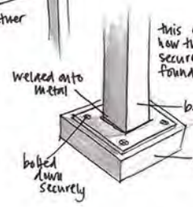
3

HOW WILL STRUCTURE SUPPORT BUILDING?

The structure of a building is very significant when it comes to high-tech architecture. Often the buildings have extreme or exaggerated structural detail - much like the centre Pompidou. I have decided to use steel framing. This is so the structure can be shown in its raw state, going with my steel detail. Wooden framing isn't industrial looking and wouldn't be able to blend in well with my building. Also, in my research for my architectural movement I found that steel and glass are commonly used because they resemble modern technology. Since a lot of my building is glass, the steel will compliment this choice of material.



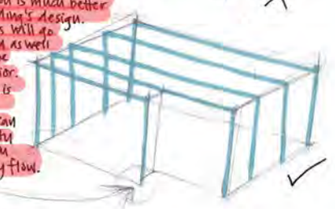
example of a load bearing wall



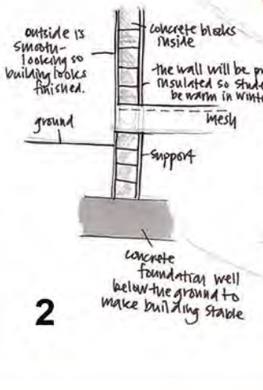
this close up shows how the steel beam is secured onto the concrete foundation

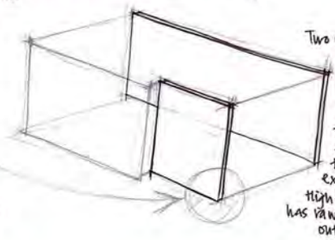
These blue lines show where I could potentially place my metal columns of the frames. Although, this would hold up my common room the beams would interfere with my large glass bi-folding doors.

This option is much better suited to my building's design. The metal columns will go over the building and as well as holding it up will be shown on the exterior. Because the front side is open it means my bi-folding doors can fully open with no interruption and easy flow.



I will be incorporating the steel framing like these images into my building's structure





Two of my building's walls will be load bearing concrete walls. It is appropriate because there are no windows on these facesso installation will be easy. The concrete will also go with the steel aesthetically because the concrete will be exposed from the outside. High-tech architecture usually has raw, exposed materials on the outside.

2

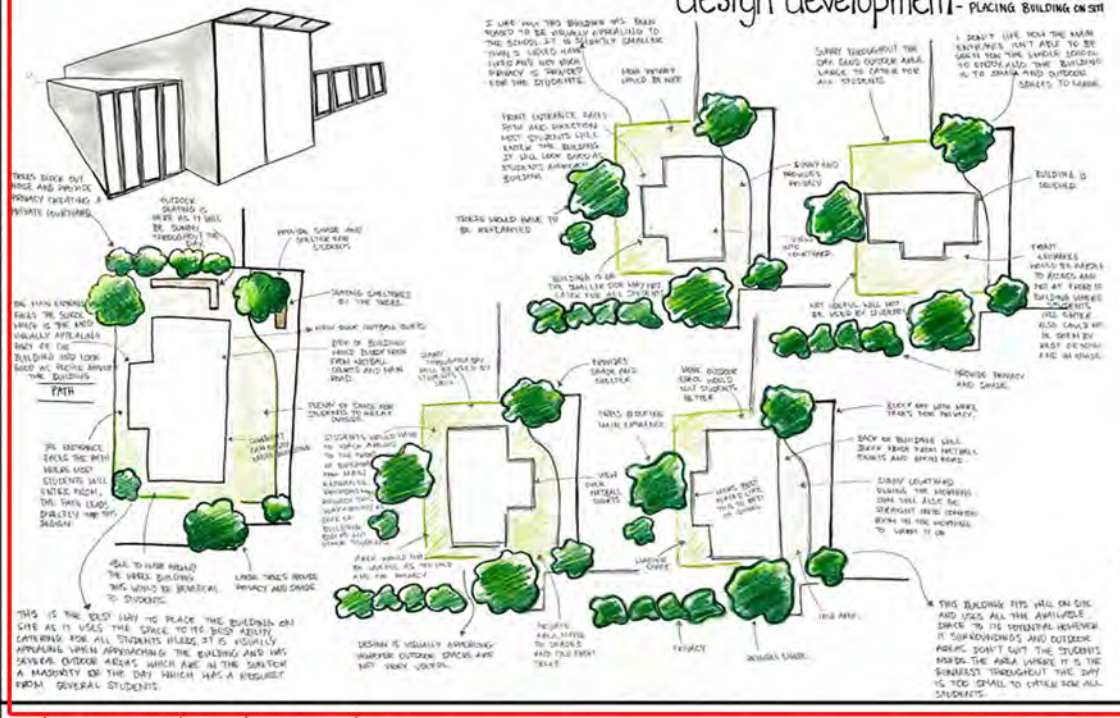
	Grade Boundary: Low Merit
3.	For Merit, the student needs to clearly develop a spatial design through graphics practice. This involves: • reviewing and refining design ideas that incorporate spatial design knowledge • making design judgements on relevant features of the design, in response to the brief, that inform the progression of design ideas. This student has clearly developed a spatial design for a structure, a senior common room, using graphics practice. Progression is shown because the idea generation stage has been effectively informed by the initial research. The development of the design ideas shows a process of review and refinement of the ideas (1) (2). The investigation of the form evolves, but tends to move away from the initial inspiration through this process (3). The site research (4) and the design judgements are incorporated effectively into the layout design. This aspect is moving towards well-considered design ideas, as the links between the ideas are clearly shown. The student produced evidence of research, an outcome in sketch format, site analysis and placement and other design work (not exemplified here). For a more secure Merit, the student could expand the depth of the design thinking and linking of design ideas, to move towards well-considered design ideas. The student could have further integrated the choices of materials and research of structure type etc. into the design ideas, to connect them together in a more logical way.

design development - AVAILABLE BUILDING SITE AND ITS SURROUNDINGS

HOW WILL MY BUILDING BE PLACED ON SITE?

AVAILABLE BUILDING SPACE AND ITS THE EXISTING SURROUNDINGS

design development - PLACING BUILDING ON SITE



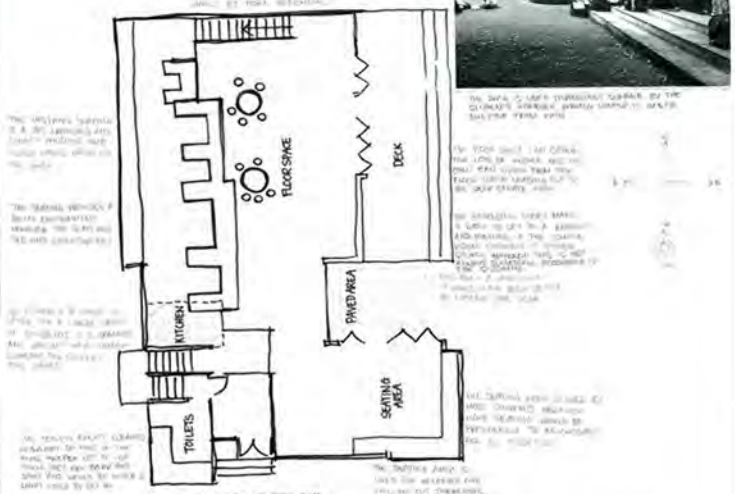
4

LARGE, SUNNY AND WELL KNOWN SPACE WITHIN

UNCOMFORTABLE SEATING

KITCHEN IS TO SMALL AND CRAMPED

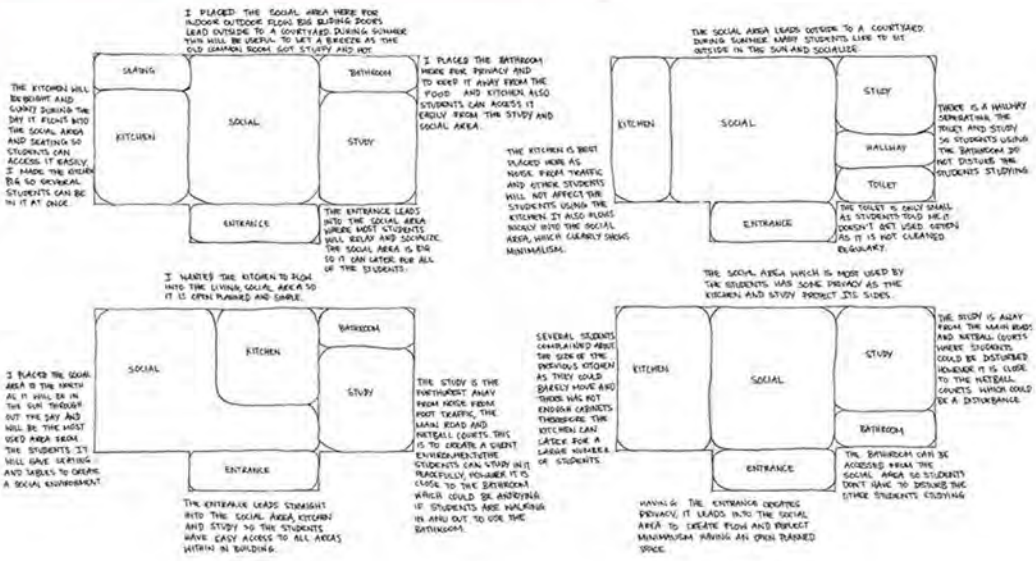
design development - Good and bad points of existing common room



Existing SCR Scale 1:100

design development - FLOOR PLAN, GOOD AND BAD POINTS

DOES MY DESIGN MEET THE NEEDS OF THE USER?



design development

How can I make my building visually appealing?

THE CROSS IS TOO CHUNKY AND LOOKS OUT OF PLACE ON SUCH A NARROW BUILDING.

I LIKE THE LONG NARROW SHAPE OF THIS BUILDING IT IS MODERN AND ELEGANT HOWEVER MAY NOT PROVIDE A BIGGER ENOUGH AREA TO CATER FOR ALL STUDENTS.

THIS CROSS REFLECTS TADAO ANDO'S MINIMALIST BUILDINGS HOWEVER IT IS RELATED TO RELIGION SO IT IS NOT SUITABLE.

1

I DON'T LIKE HOW THE SIDE OF THIS BUILDING HAS BECOME THE FRONT IT IS NARROW AND BOXY LOOKING.

THE THINNER CROSS IS MORE ELEGANT AND GRACEFUL WHILE STILL BEING A MAIN DETAIL OF THE BUILDING. I PREFERRED IT ON THE SIDE OF THE BUILDING.

I USED A DOUBLE LINE TO GET AWAY FROM USING A CROSS. IT DOESN'T VISUALLY BENEFIT THE BUILDING AND IS UNESSCARY DETAIL.

BY ADDING TWO SMALLER PARTS TO THE BUILDING IT MAKES THE SHAPE OF THE BUILDING MORE VISUALLY INTERESTING. IT CREATES RHYTHM AND PROVIDES MORE SPACE.

THE LINES WHICH CROSS IN THE MIDDLE ADD MINIMAL DETAIL AND CREATE MOVEMENT BY DRAWING MY EYE VERTICALLY AND HORIZONTALLY UP THE BUILDING.

THE THIN CROSS HARMONISES WELL WITH THIS BUILDING AND ALSO ADDS ELEGANCE WHILE STILL KEEPING A MINIMALISTIC STYLE.

I TOOK THE BASIC SHAPE OF A RECTANGLE AND STRETCHED IT OUT TO MAKE A MORE SLENDER AND THIS CREATES A SENSE OF ELEGANCE.

HAVING THE MIDDLE SECTION OF THE BUILDING TALLER CREATES INTERESTING DETAIL AND WOULD ALLOW THE INSIDE TO HAVE HIGH CEILINGS.

THE TWO SIDE COMPARTMENTS WOULD LOOK MORE VISUALLY APPEALING AND ELEGANT IF THEY WERE NARROWER CREATING A SLENDER, CLEAN CUT FINISH.

THIS BUILDING CLEARLY SHOWS THE MOVEMENT MINIMALISM. THE TALL GLASS DOORS ARE MODERN AND GRACEFUL AND SUIT THIS DESIGN BETTER THAN A CROSS. THIS DESIGN IS SYMMETRICAL. I HAVE USED THE PLAIN SHAPE OF A RECTANGLE AND STRETCHED AND SHRUNK IT TO CREATE THIS DESIGN. THE DESIGN IS MADE OF RECTANGLES WHICH HARMONISES IT AND BRINGS IT TOGETHER. I AM STILL NOT COMPLETELY HAPPY WITH ITS VISUAL APPEARANCE, MORE MINIMAL DETAIL NEEDS TO BE ADDED.

HAVING SLIM GLASS PANELS COVER THE FRONT OF MY DESIGN IS VISUALLY APPEALING AND MINIMALISTIC.

THE GLASS WINDOW CREATE A SENSE OF PATTERN. BY REPEATING THEM ON THE OTHER SIDE THE DESIGN IS SYMMETRICAL.

I PREFERRED A MORE SLENDER AND STRETCHED APPEARANCE AS IT LOOKED MORE ELEGANT

STEEL BEAMS

THIS DESIGN IS TOO BOXY AND SQUARE A LONGER MORE RECTANGULAR SHAPE WOULD BE MORE GRACEFUL.

I TRIED TO SEE WHAT IT WOULD LOOK LIKE IF YOU COULD SEE THE STRUCTURE OF THE ROOF. I THINK IT LOOKS MESSY AND UNFINISHED ALTHOUGH I DO LIKE THE OVERHANGING ROOF PLACED IN BETWEEN THE TWO WALLS, AND IT ADDS SIMPLE DETAIL.

EXTEND AND MAKER SLIMER.

BY ADDING AN OVERHANGING ROOFLINE I HAVE CREATED MOVEMENT AND ADDED MINIMAL DETAIL, WHILE STILL HAVING A FLAT ROOF.

I DON'T LIKE THESE WINDOWS ON THE SIDE IT MAKES THE DESIGN TOO BUSY NOT MINIMALISTIC. SMALLER TOP WINDOWS WOULD BE PREFERABLE.

I LIKE THE SEQUENCE OF FOUR PANELS ON EITHER SIDE OF THE BUILDING IT CREATES A PATTERN BY REPEATING THE RECTANGULAR SHAPE.

THE GLASS DOOR CAN HOOK BACK TO CREATE A FREE STANDING GLASS PANEL. THIS LOOKS ELEGANT AND WOULD BENIFIT THE USERS WHO COULD WALK IN AND OUT EASILY.

design development

HOW CAN I MAKE MY BUILDING VISUALLY APPEALING?

HAVING A FLAT ROOF IS OFTEN SEEN IN MINIMALISM IT CREATES A CLEAN CUT APPEARANCE.

BACK

THE SMALL TOP WINDOWS LET IN LIGHT AND HARMONISE WITH THE RECTANGULAR DOORS.

THE BACK OF THE BUILDING HAS BY FOLDING DOORS FOR INDOOR OUTDOOR FLOW. I LIKE THE LOOK OF LARGE GLASS DOORS HOWEVER THEY DON'T PROVIDE MUCH PRIVACY.

2

BACK

I PREFER THE DOUBLE GLASS DOORS TO BY FOLDING DOORS AS IT HARMONISES WITH THE FRONT ENTRANCE AND SUITS THE SHAPE OF THE BUILDING BETTER. HAVING GLASS PANELS ON THE SIDE AS WELL AS THE FRONT IS TOO BUSY AND PROVIDES NO PRIVACY.

THIS BUILDING APPEARS VERY MINIMALISTIC. IT IS SLENDER AND LONG CREATING MOVEMENT BY DRAWING YOUR EYE TO THE BACK OF THE BUILDING. THE LARGE GLASS DOORS ARE MODERN AND CHIC LOOKING. THEY WILL LET IN LOTS OF LIGHT WHICH IS A PART OF MINIMALISM, AS LIGHT CREATES SPACE

THE BUILDING HAS BEEN DESIGNED IN THIRDS WHICH IS APPEALING TO THE HUMAN EYE. THE FOUR WINDOW PANELS ON EACH SIDE OF THE BUILDING SHOW REPETITION FROM REPEATING THE RECTANGULAR SHAPE. THESE ALSO HARMONISE WITH THE RECTANGULAR DOORS.

design development - FLOOR PLAN

HOW WILL EVERYTHING BE ARRANGED TO SUIT THE USERS NEEDS?

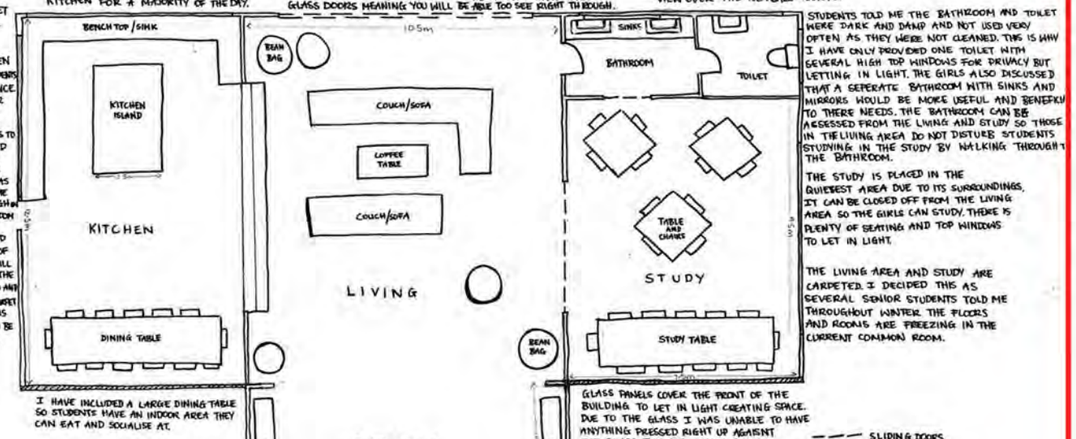
DURING SUMMER THE USERS OF THE PREVIOUS COMMON ROOM INFORMED ME IT GETS STUFFY AND HOT WHICH IS WHY I HAVE USED SEVERAL WINDOWS AND BIG DOORS TO LET IN A BREEZE DURING SUMMER.

HIGH TOP WINDOWS LET IN LIGHT BUT PROVIDE SOME PRIVACY FOR THE STUDENTS. THE SUN WILL BE HITTING THE KITCHEN FOR A MAJORITY OF THE DAY.

THE GLASS SLIDING DOORS CREATE INDOOR OUTDOOR FLOW. THEY ARE ALSO OPPOSITE THE FRONT ENTRANCE GLASS DOORS MEANING YOU WILL BE ABLE TOO SEE RIGHT THROUGH.

I PLACED THE SOCIAL AREA IN THE MIDDLE AS IT IS WHERE MOST STUDENTS WILL SOCIALISE AND THEY WILL WALK INTO IT FIRST FROM THE ENTRANCE. ALTHOUGH IT DOESN'T HAVE MUCH PRIVACY FROM THE GLASS DOORS THE STUDY AND KITCHEN PROTECT FROM THE SIDE PROVIDING SOME PRIVACY. IT WILL ALSO HAVE A VIEW OVER THE NETBALL COURTS.

I LEFT LARGE KITCHEN AREA SO MANY STUDENTS CAN ACCESS IT AT ONCE. LARGE CABINETS FOR STORING FOOD AND POTTERY, HAVE BEEN PLACED AGAINST WALLS TO SAVE SPACE AND AVOID CLUTTER. THE KITCHEN ISLAND ALSO PROVIDES EXTRA BENCH SPACE AS STUDENTS INFORMED ME THERE WAS NOT ENOUGH IN THE EXISTING COMMON ROOM KITCHEN. THE KITCHEN AREA HAS BEEN PLACED ON THE NOISIEST SIDE OF THE BUILDING AS IT WILL NOT AFFECT THE GIRLS. THE KITCHEN WILL BE TILED AND THEN STEP DOWN TO CARPET IN THE LIVING AREA THIS IS SO THE KITCHEN CAN BE KEPT CLEAN EASILER.



STUDENTS TOLD ME THE BATHROOM AND TOILET WERE DARK AND DAMP AND NOT USED VERY OFTEN AS THEY WERE NOT CLEANED. THIS IS WHY I HAVE ONLY PROVIDED ONE TOILET WITH SEVERAL HIGH TOP WINDOWS FOR PRIVACY BUT LETTING IN LIGHT. THE GIRLS ALSO DISCUSSED THAT A SEPERATE BATHROOM WITH SINKS AND MIRRORS WOULD BE MORE USEFUL AND BENEFICIAL TO THERE NEEDS. THE BATHROOM CAN BE ACCESSED FROM THE LIVING AND STUDY SO THOSE IN THE LIVING AREA DO NOT DISTURB STUDENTS STUDYING IN THE STUDY BY WALKING THROUGH THE BATHROOM.

THE STUDY IS PLACED IN THE QUIETEST AREA DUE TO ITS SURROUNDINGS, IT CAN BE CLOSED OFF FROM THE LIVING AREA SO THE GIRLS CAN STUDY. THERE IS PLENTY OF SEATING AND TOP WINDOWS TO LET IN LIGHT.

THE LIVING AREA AND STUDY ARE CARPETED. I DECIDED THIS AS SEVERAL SENIOR STUDENTS TOLD ME THROUGHOUT WINTER THE FLOORS AND ROOMS ARE FREEZING IN THE CURRENT COMMON ROOM.

I HAVE INCLUDED A LARGE DINING TABLE SO STUDENTS HAVE AN INDOOR AREA THEY CAN EAT AND SOCIALISE AT.

GLASS PANELS COVER THE FRONT OF THE BUILDING TO LET IN LIGHT CREATING SPACE. DUE TO THE GLASS I WAS UNABLE TO HAVE ANYTHING PRESSED RIGHT UP AGAINST THE GLASS. THIS ALSO ENABLES THE GIRLS TO HAVE A VIEW OF OUTSIDE WHILE THEY STUDY.

SLIDING DOORS
TOP WINDOWS
FULL GLASS WINDOW PANELS
GLASS DOORS
SLIDING GLASS DOORS

THE LAYOUT OF MY DESIGN CLEARLY SHOWS MINIMALISM. THE OPENPLAN LIVING AND INDOOR OUTDOOR FLOW CREATE SPACE WHICH IS A MAIN DESIGN PRINCIPLE SEEN IN TADAO ANDO'S WORK. MINIMAL FURNISHINGS HAVE BEEN USED AND THERE IS ALOT OF ROOM LEFT TO CATER FOR ALL THE STUDENTS. I HAVE DESIGNED THE LAYOUT SO THERE IS NO WASTED SPACE AND BIG ENOUGH AREAS FOR ALL STUDENTS. I HAVE CAREFULLY CONSIDERED WHERE I HAVE PLACED THE ROOMS DUE TO THINGS LIKE THE SUN, NOISE AND PRIVACY FOR GIRLS.

IN THE ENTRANCE I HAVE PROVIDED ANOTHER AREA [illegible] CAN SIT AND RELAX. I ALSO DECIDED MOVEABLE SEATING WOULD BE USEFUL TO THE STUDENTS SO I USED BEAN BAGS, THIS MEANS THEY CAN BE MOVED AROUND TO WHERE THE STUDENTS LIKE, EVEN OUTDOORS DURING SUMMER.

THE DOUBLE GLASS DOORS WILL LET IN LOTS OF LIGHT AND BE VISUALLY APPEALING WHEN STUDENTS ARE APPROACHING THE BUILDING.

I PROVIDED SEATING AND A COFFEE TABLE SO THE GIRLS CAN RELAX AND SOCIALIZE WITH ONE ANOTHER. THE SEATING IN THE CURRENT COMMON ROOM IS UNCOMFORTABLE AND OLD SO SOFAS AND BEANBAGS WOULD BE PREFERABLE TO BENCHES AS STUDENTS COMPLAINED ABOUT PREVIOUS SEATING.

design development - STRUCTURE

3

THE GLASS DOORS WILL FIT INSIDE THE TILT SLAB.

THE DOORWAYS LEADING EACH PART OF THE BUILDING TOGETHER WILL HAVE TO BE CUT INTO THE TILT SLAB.

SMALL TOP WINDOWS

DOORWAY LEADING TO BATHROOM

DOORWAY LEADING TO STUDY.

THESE STEEL BEAMS RUN DOWN THE BUILDING. TILTSLAB FITS IN BETWEEN EACH BEAM. THESE BEAMS MAKE UP THE SKELETON OF THIS BUILDING. THEY ARE STRONG AND CAN STAND IN WINDY CONDITIONS UNLIKE METAL BARS THIS IS WHY STEEL BEAMS WERE MOST SUITABLE FOR MY DESIGN.

TILT SLAB IS CUT PRIOR TO BE FITTED INTO THE BUILDING I HAVE DRAWN CUTS IN THE TILT SLAB OF WHERE DOORS AND WINDOWS WILL BE PLACED TO SHOW THE DETAIL OF MY BUILDING.

THE ROOF OF THE TALLEST MIDDLE SECTION OF MY DESIGN HAS A STEEL BEAM RUNNING DOWN THE ROOF IT CONNECTS WITH THE TWO END BEAMS. THIS IS TOO SUPPORT THE CEILING SO IT DOESN'T DROOP OR SAG. IT PROVIDES AN EXTRA STRENGTH AND LONGER BURABILITY FOR MY DESIGN. IT ALSO ADDS SMALL DETAIL TO THE INSIDE CEILING OF MY DESIGN.

WINDOWS IN TOILET AND IN THE STUDY.

THE TILT SLAB WILL HAVE HOLES CUT OUT FOR SOME SMALL WINDOWS ARE A DOOR.

THE STEEL BEAMS ARE WELDED AND BOLTED TOGETHER TO ENSURE DURABILITY AND STRENGTH. THESE BEAMS WILL HOLD THE TILT SLAB, WINDOWS AND DOORS. IT IS THE STRONGEST MATERIAL SUITABLE FOR MY DESIGN AS IT APPEARS MINIMALISTIC.

THE ALUMINIUM FRAMES WHICH BORDER THE WINDOWS PROVIDES A STRONG HOLD FOR THE GLASS SECURING IT IN PLACE.

THESE SHEETS OF TILT SLAB WILL FIT IN BETWEEN THE STEEL BEAMS THAT RUN DOWN THE BUILDING, AND THE GLASS WINDOWS WILL POP INTO THEM.

THE STEEL BEAMS ARE ERECTED INTO A CONCRETE FOUNDATION SO THEY ARE STABLE CREATING A SAFE BUILDING FOR ITS USERS.

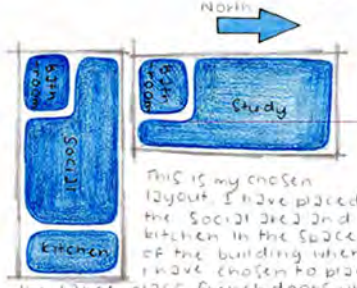
THE STEEL BEAMS ARE PLACED AT THE BACK AND FRONT OF MY DESIGN. THIS MAKES THE ENTRANCE BOLD AND STAND OUT. IT ALSO BALANCES THE WEIGHT OF THE BUILDING BETWEEN THE TWO ENDS.

Other Student work submitted has not been included in this exemplar

	Grade Boundary: High Achieved
4.	For Achieved, the student needs to develop a spatial design through graphics practice. This involves: • exploring and refining design ideas that draw on spatial design knowledge • making design judgements on the positive and/or negative aspects of aesthetic and functional features of the design in response to the brief. This student has developed a spatial design for a structure, a senior common room, using graphics practice. The sketches and models at the start of the process have been used to create divergent ideas, which then flow through to the refinement of the design ideas. There are valid design judgements given (1), which show the influence of research into sustainable design. The development of the layout, structure and materials (2) integrates the research into the ideas and this informs the progression of those ideas. A range of visual communication techniques has been used (see Explanatory Note 4) and these have been incorporated into the design process. Other work has also been submitted (not exemplified here). To reach Merit, the student could strengthen the flow of design ideas from the initial exploration stage to the final solution through the refinement process. The range of design judgements could also be strengthened to focus on the more relevant aspects or features of the design and further refine the form.

2

LAYOUT



This is my chosen layout. I have placed the social area and kitchen in the space of the building where I have chosen to place the large glass French doors which will be the entrance to the senior common room. This is because this is going to collect both the morning and afternoon sun. Therefore it is the best place for an open area. I have placed the bathrooms on the south-west side of the building as this area collects the least amount of sun. The study is located on the first floor as it will be secluded and not as noisy as if it were placed on the ground floor. i.e. ideal for studying.

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 a social area.

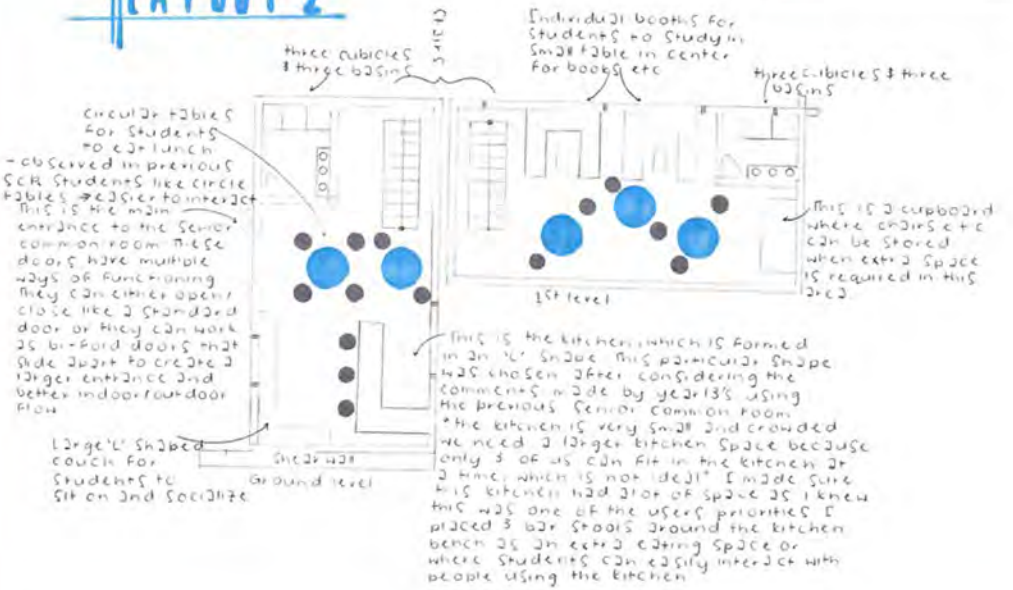
I am going to experiment with placing other utilities on the 1st floor which will also make the ground floor less crowded.

I don't think the 1st floor is the best place for a kitchen as this is because it will most likely be a utility people use the most so it is inconvenient for it to be upstairs. The bathrooms currently located in the south east side of the building which 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.

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

This layout is good. It may be more convenient as 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



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.

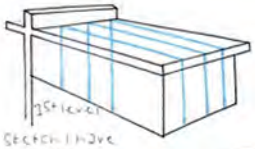
3 If the building were placed on the site like this I would be very easily accessed by students using the facility however it is not very secluded from the school. It will also not collect the after-noon or morning sun.

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 sunpath allowing it to capture both the morning and afternoon sun. This 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.

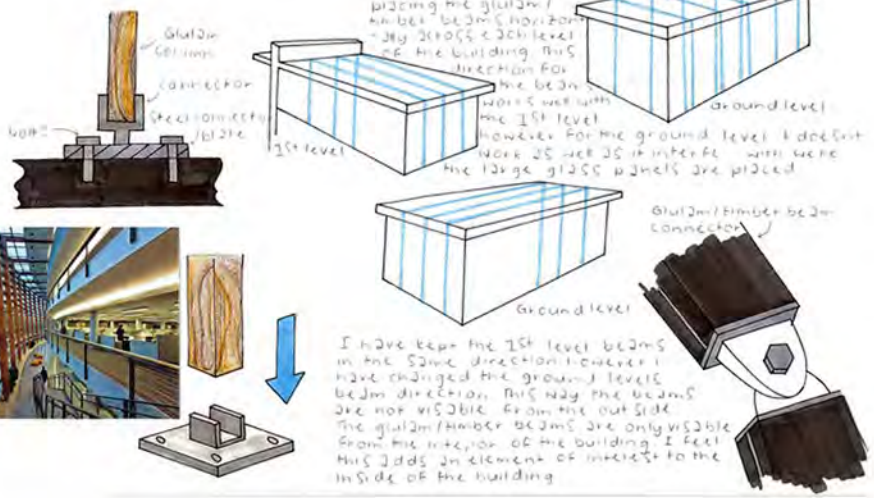
1 In this sketch the way the building is placed on the site is not ideal as the back of the building is where the morning and afternoon sun favors. However the back of the building is also facing the main road which will not be as much noise created by traffic

2

STRUCTURE



In this sketch I have experimented with placing the glulam/timber beams horizontally across each level of the building this direction for the beams works well with the 1st level however for the ground level it does not work as well as it interfere with where the large glass panels are placed



I have kept the 1st level beams in the same direction however I have changed the ground levels 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.

1

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 'floating' level is very multifunctional as it could be used for an outdoor area, corporate this idea of 'multiple functions' is very sustainable.

Sheath will create a visually strong structure.

In this concept I rearranged some windows and placed them in areas where they would capture the most sunlight. I also enhanced the designs appearance by adding a sheath 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.

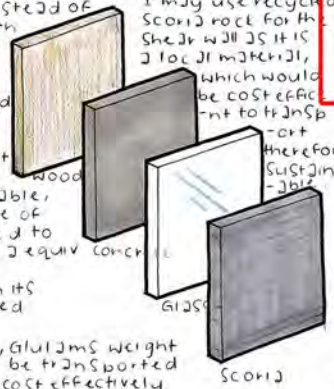
MATERIALS

1

- 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, Glulams 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 designs structure as it is the most sustainable option.



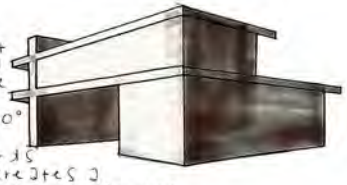
I may use recycled steel rock for the sheath wall as it is a local material, which would be cost effective and therefore sustainable.

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 concretes 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 demand in summer. Concrete can be produced in the quantities needed for each project, reducing waste.

I will used 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 bird's 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 buildings 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 bird's 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 submitrted has not been included in this exemplar

	Grade Boundary: Low Achieved
5.	For Achieved, the student needs to develop a spatial design through graphics practice. This involves: • exploring and refining design ideas that draw on spatial design knowledge • making design judgements on the positive and/or negative aspects of aesthetic and functional features of the design in response to the brief. This student has developed a spatial design for a structure using graphics practice. The student has carried out some research (1) that has been used or referred to during the development of the design ideas. There is some relevant technical knowledge evident (2) that has been used in the development of the design ideas. Other work has also been submitted (not exemplified here). For a more secure Achieved, the student could strengthen the use of the technical knowledge and visual communication of the ideas, i.e. the materials section (3). More refinement of the design ideas for the common room (4) would be required for a secure Achieved, i.e. there should be more balance between the convergent aspect of the design ideas and the divergent (explorative phase) aspect of the design process.

Senior Common Room Analysis

The kitchen seems to be too small for all of year 13 students. There is only 3 maximum people space to get in.

It's really crowded at lunch time people can't get through because there is not much of the space where seniors can all sit. Some of the seniors had to sit on the ground because there is no sits for them. This senior common room is built in 2 stories, the first floor has kitchen, toilet, 2 living area and second floor has few benches to sit down. There is small 2 rooms on second floor it's used for storage.

On the first floor one of the living area has some benches to sit down and there is one little desk, for about two people to use. Behind the benches there's windows and it gives nice and warm sunlight at the noon as you can see it on the photograph.

There should be more deskes so that senior students can study in senior common room not library or any other place.

There is also deck alongs the building and at the end of the deck there is grass. Senior students sit on the benches that are on the deck and some of the seniors sit on the deck at lunch time or any free period they have.

The first floor and second floor is built hollow in the middle so seniors can look down and up each other, so that they could communicate.

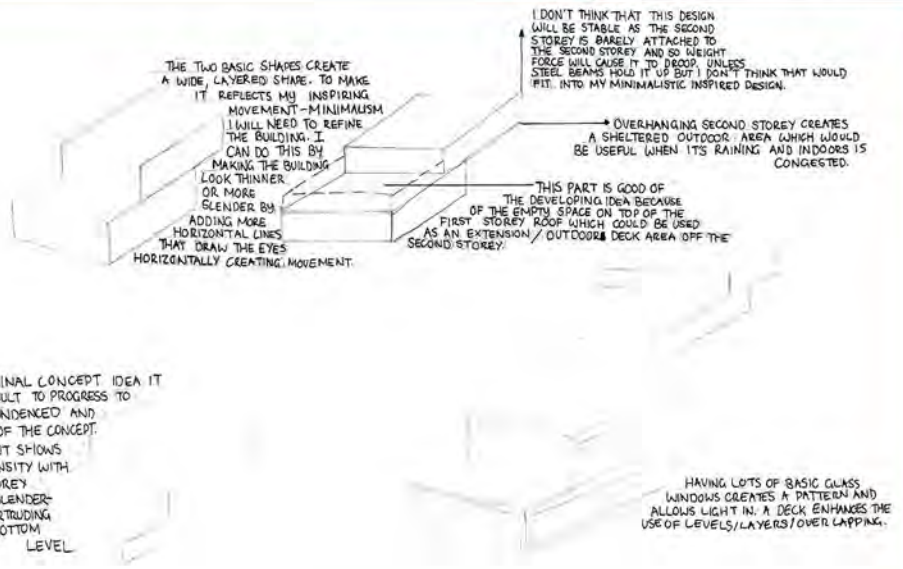
There is long windows along to the deck, and it has curtains inside. Most of the time the curtains are closed. This could tell us that the sunlights are too strong or they don't enjoy the sunlights or maybe it's not the place to have windows because sunlights don't come in that much.

The other living area in first floor where the long windows are, don't have any desks that seniors can study on. Seniors might have to sit on the floor to do their work. There is stack of chairs on the corner of the room but there is only few of them.

There should be more benches so that senior students don't have to sit down on the floor when they don't have space to sit. Also the senior students don't use the blank space except for sitting down. So instead of having the spare blank there should be more benches so that seniors can stay more comfotable.

1

FORM DEVELOPEMENT

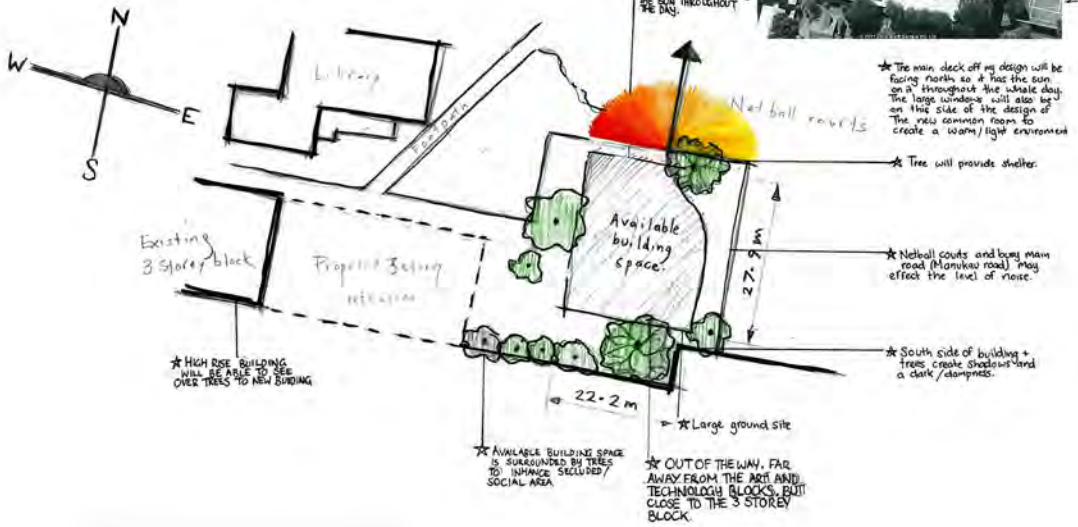


4

Other student work submitted has not been included in this exemplar

BUILDING SITE

RESEARCH ON SITE AND SURROUNDINGS



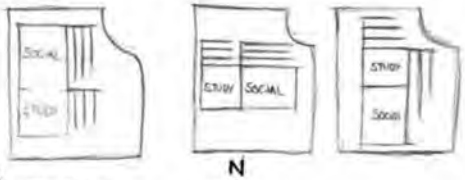
CRITERIA FOR INSIDE MY DESIGN

ACCORDING TO CURRENT/FUTURE USERS OF THE COMMON ROOM MY DESIGN SHOULD INCLUDE

1 LARGE KITCHEN
BATHROOM
ALL TOILET
MULTI-LEVELED
SPACE
BIG SOCIAL AREA
STUDY AREA THAT RESEMBLES LIBRARY
LIGHT - NATURAL

I HAVE TRIED TO INCORPORATE AS MANY OF THESE FEATURES INTO MY DESIGN AS POSSIBLE TO CONSIDER THE NEEDS OF THE USERS TO ACCOMMODATE ALL FACILITIES REQUIRED BY YEAR 13 STUDENTS.

HOW WILL IT BE POSITIONED ON SITE?



TOP FLOOR

BOTTOM FLOOR

CONCEPT INTERIOR LAYOUT

MY INITIAL INTERIOR LAYOUT FOR MY BUILDING CONSISTS OF THE TWO LEVELS (TOP FLOOR AND BOTTOM FLOOR). THE BOTTOM LEVEL WILL BE VERY SOCIAL AS IT IS VERY OPEN WITH A GOOD INDOOR TO OUTDOOR LIVING FLOW WHICH IS BENEFICIAL FOR WHEN THE WEATHER IS FINE. AS THERE IS MORE FLOOR SPACE. THE KITCHEN/STAIRS/TOILET ARE LOCATED IN THE SOUTHERN END OF THE BUILDING TO TUCK THEM OUT OF THE WAY FROM THE SOCIAL/MEETING PLACE. THE STAIRS LEAD UP TO THE SECOND FLOOR WHICH IS THE 'QUIET AREA' AND HAS A DOOR, TO SHUT OUT THE NOISE FROM DOWNSTAIRS. UPSTAIRS THERE WILL BE TABLES AND CHAIRS FOR STUDENTS/USERS TO DO THEIR WORK. COUCHES WILL ALSO BE LOCATED FOR THOSE WHO WANT TO READ. MY DESIGN IS MULTIPURPOSEFUL, USER SPECIFIC AND APPROPRIATELY POSITIONED IN RELIVATION TO THE LOCATION OF THE SITE.

BOTTOM FLOOR

TOP FLOOR

CHOSEN LAYOUT

MY CHOSEN LAYOUT IS SIMILAR TO MY INITIAL LAYOUT BUT MORE THOUGHTFULLY POSITIONED IN TERMS OF USER FRIENDLY, EVENESS AND A OPEN FLOW. THE ENTRANCE IS LOCATED AT THE VERY TOP-NORTH OF THE BUILDING WHICH THEN GIVES WAY TO THE LARGE, CASUAL SOCIAL/LIVING AREA. SYMMETRICALLY ON THE SW AND SE SIDES FROM THE ENTRANCE IS THE TOILET CUBICAL WHICH IS ONLY SMALL AS ACCORDING TO USERS OF THE CURRENT SENIOR COMMON ROOM THE TOILET IS RARELY USED BECAUSE NO OTHER STAFF THERE VERY LONG. THAT'S GOING TO CHANGE WITH MY NEW DESIGN AS THE SEGREGATED AREAS, OFFICE, LOUNGE, THINGS TO DO FOR STUDENTS THE STAIRS ARE ON THE OPPOSITE SIDE OF THE ENTRANCE AND BEHIND THE TOILET AND STAIRS IS THE KITCHEN WHICH UNLIKE THE CURRENT KITCHEN IS LONG AND SPACED OUT.

FINAL LAYOUT

WHEN PLACING THE BUILDING ON SITE IT IS IMPORTANT TO TAKE INTO ACCOUNT THE DIRECTION OF THE SUN. THE MAIN ENTRANCE TO THE BUILDING IS NORTH FACING SO THE SUN WILL STREAM THROUGH THE WINDOWS AND DOORS THROUGHOUT THE DAY. THE EASTERN SIDE OF THE BUILDING HAS LARGE WINDOWS AND AN EXTENDING DECK SO IT WILL GET THE MORNING SUN. THE MAIN ENTRANCE IS NOT FACING THE SUN AS THE VIEW OUT TO THE WEST SIDE WILL ALSO HAVE LARGE WINDOW TO CATCH THE AFTERNOON SUN. ALTHOUGH THROUGHOUT THE DAY THIS SIDE WILL BE SHADED AND WON'T GET MUCH SUN WHEN IN USE AS SCHOOL FINISHES AT 3.15 PM THE WINDOWS ON THE WEST SIDE ARE AN IMPORTANT DESIGN ELEMENT AS MY BUILDING IS INSPIRED BY THE MINIMALISTIC / MODERNISM MOVEMENT AND SYMMETRY IS IMPORTANT.

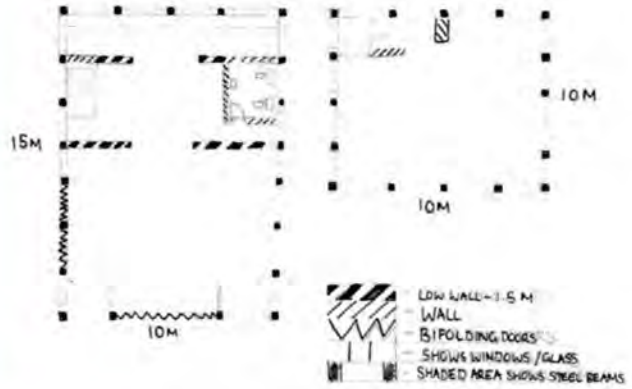
FINAL LAYOUT

- FUNCTION OF DESIGN FEATURES.

2

I DESIGNED MY LAYOUT FOR THE INTERIOR OF THE NEW SENIOR COMMON ROOM TO ACCOMADATE THE NEEDS OF ALL USERS WITH SEPERATE DESIGNATED SOCIAL AND STUDY AREAS. YOU WILL NOTICE THE GROUND FLOOR CONTAINS THE KITCHEN, BATHROOM AND SOCIAL AREA AS SHOWN ON MY SITE POSITION PAGE. THERE ARE NOT WALLS SEPERATING EACH DIVISION (NOT INCLUDING THE TOILET WHICH HAS TO HAVE WALLS FOR PRIVACY REASONS) I HOWEVER USED LOW WALLS TO ADD VISUAL VARIETY TO THE BOTTOM FLOOR. I WANTED TO CLOSE OFF THE KITCHEN AREA AT THE BACK VERY BACK BUT THOUGHT BETTER OF IT AS I WOULD BE CUTTING OUT NATURAL LIGHT FROM REACHING THE KITCHEN. THIS IS WHY I PUT LOW WALLS IN. SO SUNLIGHT CAN STILL STREAM INTO THE KITCHEN. I HAVE ALSO PUT ONE AT THE BOTTOM OF THE STAIRS TO TO HELP MINORLY CUT DOWN THE NOISE TRAVELING UPSTAIRS TO THE STUDY AREA. WHEN THE DOOR IS OPEN. MY MAIN REASON FOR USING LOW WALLS WAS TO CREATE AREAS/OPTIONS FOR VISUAL VARIETY WITHOUT CUTTING AREAS OUT COMPLETELY.

FLOOR PLAN



MATERIALS

3

STEEL FRAMING IS A COMMON MATERIAL USED IN MINIMALISTIC BUILDINGS. IT CREATES A SILVER SKELOTON TO WHICH OTHER MATERIALS CAN FIT INTO/ ONTOP OF. IT IS ALSO RELETIVELY LOW MAINTENINCE AND TO ERECT ONLY INVOLVES BOLTING TOGETHER STEEL FRAMES. THE FRAMING IS ALSO THE MAIN STRUCTURE THAT HOLDS UP THE ROOF AND HOLDS THE WALLS TOGETHER. THE WALLS ARE ALL GOING TO BE MADE OF GLASS TO ENHANCE THE VISUAL SURROUNDINGS/ ENVIRONMENT. IT MAKES SPACES SEEM LARGER THAN THEY REALLY ARE. IT ALSO ALLOWS FOR A LIGHT SPACE WHERE SUN CAN FLOOD IN FROM ANY ANGLE AT ANY TIME OF THE DAY. GLASS IS QUITE HIGH MAINTENINCE AS IT GETS DIRTY EASILY AND REQUIRES FREQUENT CLEANING BUT IT'S POSITIVES WEIGH OUT ITS NEGATIVES. THE FLOORS OF BOTH THE BOTTOM AND TOP FLOOR ARE MADE OF TIMBER WHICH IS LOW MAINTINCE AND DURABLE AND WILL FIT IN VISUALLY TO THE RATHER SIMPLE COLOUR PALLET. I HAVE LEFT ALL MATERIALS IN THEIR NATURAL STATE AS MINIMALISM IS ABOUT THE REFINED BEAUTY OF DESIGN.

STRUCTURE DEVELOPEMENT

HOW WILL IT STAY UP?

FRONT VIEW

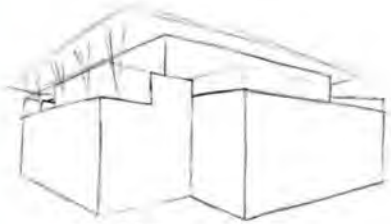
WHY I HAVE CHOSEN THIS

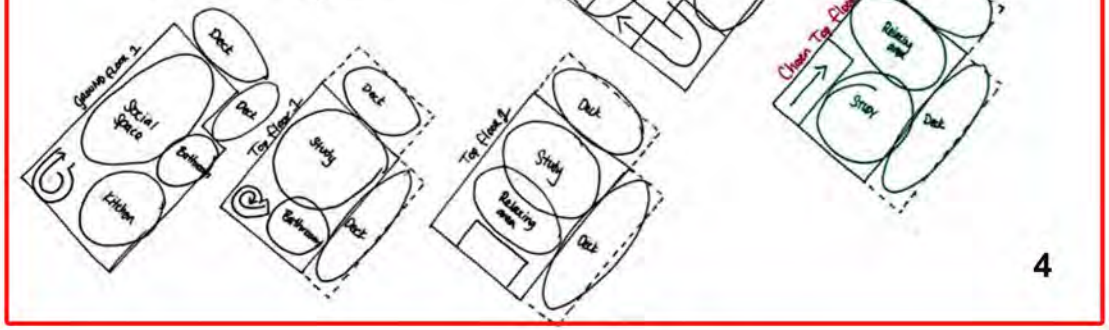
I HAVE SELECTED TO USE STEEL FRAMING TO HOLD UP MY DESIGN BECAUSE THEY ARE STRONG AND SUITABLE FOR TWO-STOREY BUILDINGS IT ALSO ENHANCES THE VISUAL ENVIRONMENT WHEN GLASS IS ADDED/PLACED BETWEEN FRAMING. I CONSIDERED USING TILT SLAB INSTEAD OF STEEL FRAMING BUT CHANGING MY DESIGN SO THERE WASN'T SO MUCH GLASS AS MY DESIGN HAS GLASS WALLS / A LOT OF WINDOWS WHICH WOULDN'T BE FUNCTIONAL IN A BUILDING MADE OF CONCRETE. ALSO MY DESIGN MUST LOTS OF LIGHT AVAILABLE AS THAT'S A COMMON FEATURE USERS WANT IN A FUTURE COMMON ROOM. THAT'S WHY I SELECTED STEEL FRAMING OVER TILT SLAB.

MY DESIGNS MAIN STRUCTURE IS MADE OF AND SUPPORTED BY STEEL FRAMING. SO WALLS ARE NOT NESSACARY TO BARE THE WEIGHT OF THE BUILDING. SOME STEEL BEAMS ARE NOT AS STRONG AND WILL SUPPORTED AS OTHERS. THE WEST-EAST FRAMES ARE ALL WELL SUPPORTED BY THE VERTICAL STEEL POLES, BECAUSE SOME POLES ARE WEAKER THAN OTHERS (REFER TO NOTES ON STRUCTURAL DRAWING OF NORTH-SOUTH STEEL FRAMES) THE STRONGER ONES WILL HAVE TO SUPPORT THE WEAKER ONES. THE STEEL FRAMING IS ALSO VISUALLY APPEALING AS THE SLENDER, METALIC LINES DRAW THE EYES ACROSS AND UP AND DOWN THE DESIGN. STEEL FRAMING ALSO FITS IN WELL WITH MY CHOSEN DESIGN MOVEMENT - MINIMALISM - AS THE STEEL FRAMING CREATES SIMPLE SHAPE AND PATTERN WITH THE CROSSING OVER OF THE STRAIGHT STEEL FRAMES.

	Grade Boundary: High Not Achieved
6.	For Achieved, the student needs to develop a spatial design through graphics practice. This involves: • exploring and refining design ideas that draw on spatial design knowledge • making design judgements on the positive and/or negative aspects of aesthetic and functional features of the design in response to the brief. This student has started to develop a spatial design for a structure, a senior common room, using graphics practice. The development of the design ideas has been expressed visually. At times the spatial visual communication techniques have been used well to communicate the development of the ideas, e.g. the structure investigation (1). Other work has also been submitted (not exemplified). To reach Achieved, the student could apply the visual communication techniques more consistently across the whole submission. The design judgements (2) should be strengthened to better cover the positive and/or negative aspects of the aesthetic and functional features of the design. An example (3) of the depth of design judgement required should be more consistently evident across the submission. The links between the space and its scale (4) should be strengthened, to show how the student has investigated the size and arrived at its final proportions.

Space Investigation





4

Floorplan Investigation

the bathroom has been put under the stairs because in the previous conservatory had not been occupied often.

the relaxing & social area have been placed in the front section of the building to give the clients room for a comfortable relaxing time.

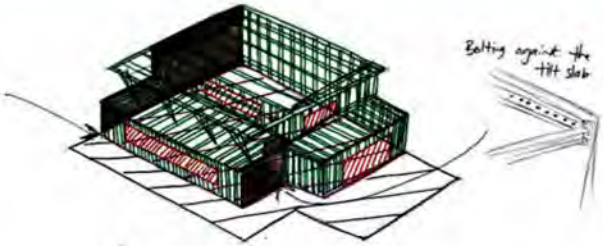
the kitchen has been made longer than the previous conservatory because of the lack of space & complaints about the area.

the study area has been placed upstairs to give the occupants quiet and an atmosphere to concentrate in.

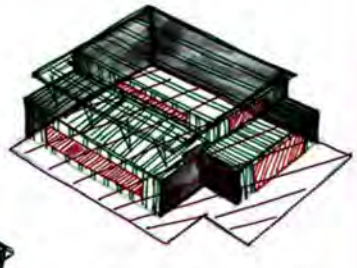
Other student work submitted has not been included in this exemplar

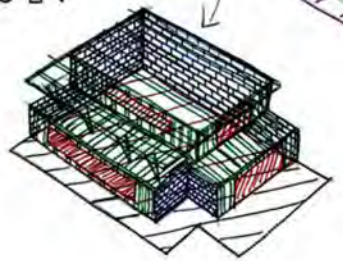
I have chosen the top structure for the senior conservatory because Waikanae is always having a structure look light. Steel creates that effect.

2



Structure Investigation





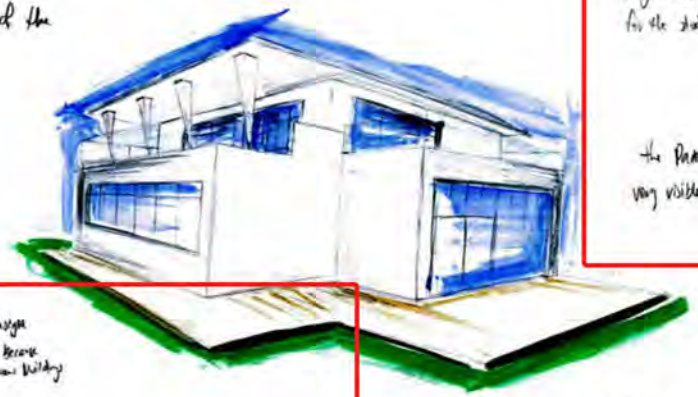
I have not chosen this structure because the block work does not flow with the modernist flowy effect & therefore is not effective.

2

the concrete slab for the deck is not effective because it doesn't give the building an aesthetic view for the light steel structure.

1

the stairs create an open view of the school & open scenery of the Building.



the Building is facing north to give more sunlight & warmth for the students using the Building.

2

the Reception access is very visible & easy to access

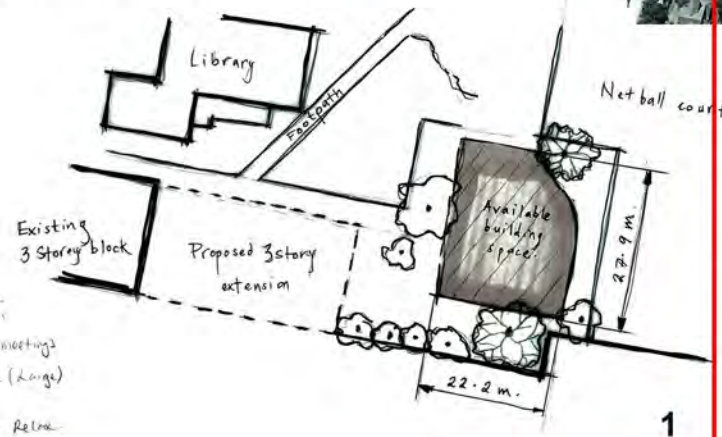
this architectural design enhances the school because it links with the new Building & museum.

2

the south cold wind has no/less access through the back because there is no access.

the form is very light & strong. this creates the modernist style & shape for the Buildings.

Site Research



1

Things I Need
- Large kitchen
- Big space for meetings
- Hangout Area (Large)
- Study space
- Outdoor Decks - Relax
- Eating Area

- Kitchen (cramped)
- Loosing Stress and tension
- Big Space for meetings
- Hang-out
- Study Space needed
- Outdoor Space needed
- Eating Space

Large Wide space on Ground floor Good for Meetings and Gatherings for the seniors of the School

Large Deck for Relaxation area is a good idea with sun facing North.

Upstairs Housed, not enough windows allowing fresh air through the common room which limits use of upstairs

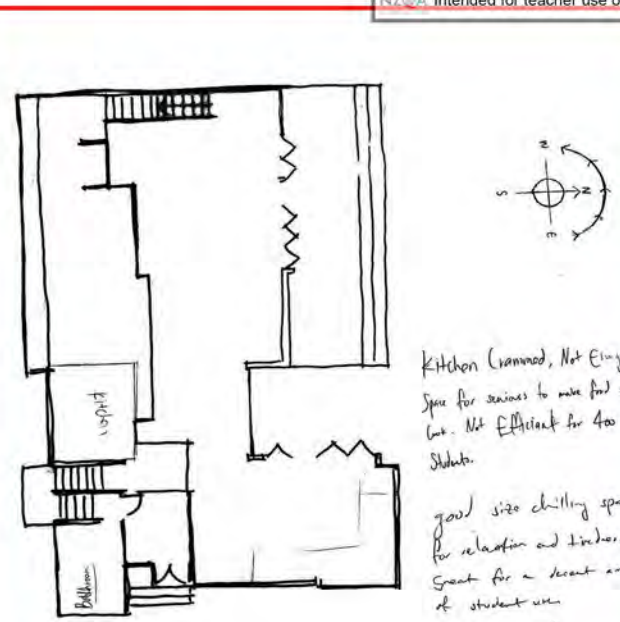
footprint of 300m² site available for the Year 13 Senior Common room

There will be too much chairs for the social space of the building and the small sized wind will not make this area a comfortable place to rest or socialize in.

This orientation is not ideal because the sun does not hit the area that are going to be most occupied by the students

The sun does not hit the areas of the building most shared.

3



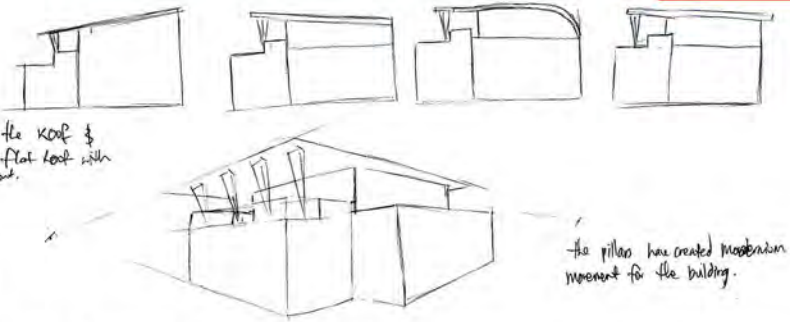
Kitchen Cramped, Not Enough Space for seniors to make food and Eat. Not Efficient for 400 Students.

good size chilling space for relaxation and Lectures. Space for a decent amount of student uses

4

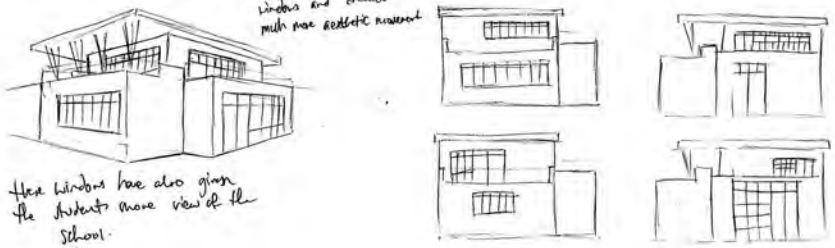
Existing SCR Scale 1:100

Design Development



I have considered the Roof & come up with a flat roof with pillars to create movement.

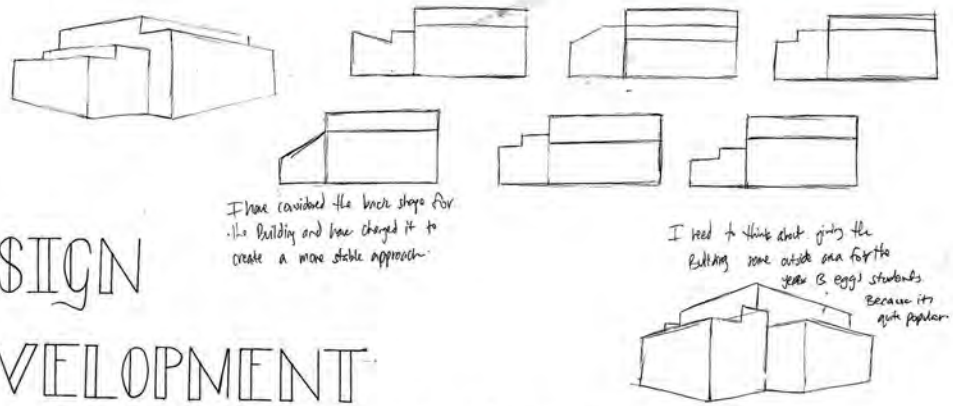
the pillars have created modernism movement for the building.



I have considered the windows and created much more aesthetic movement

These windows have also given the students more view of the School.

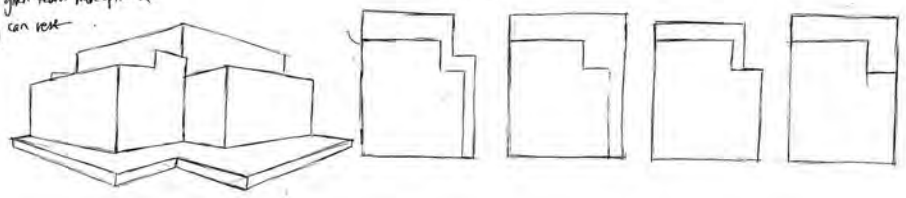
Design Development



I have considered the back shape for the Building and have changed it to create a more stable approach.

I need to think about giving the Building more outside area for the year 13 eggs students. Because its quite popular.

I have considered the deck & changes are that has given the building a more formal view



that has given them more option of where they can rest