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

Exemplar for Internal Achievement Standard

Design and Visual Communication Level 3

This exemplar supports assessment against:

Achievement Standard 91629

Resolve 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

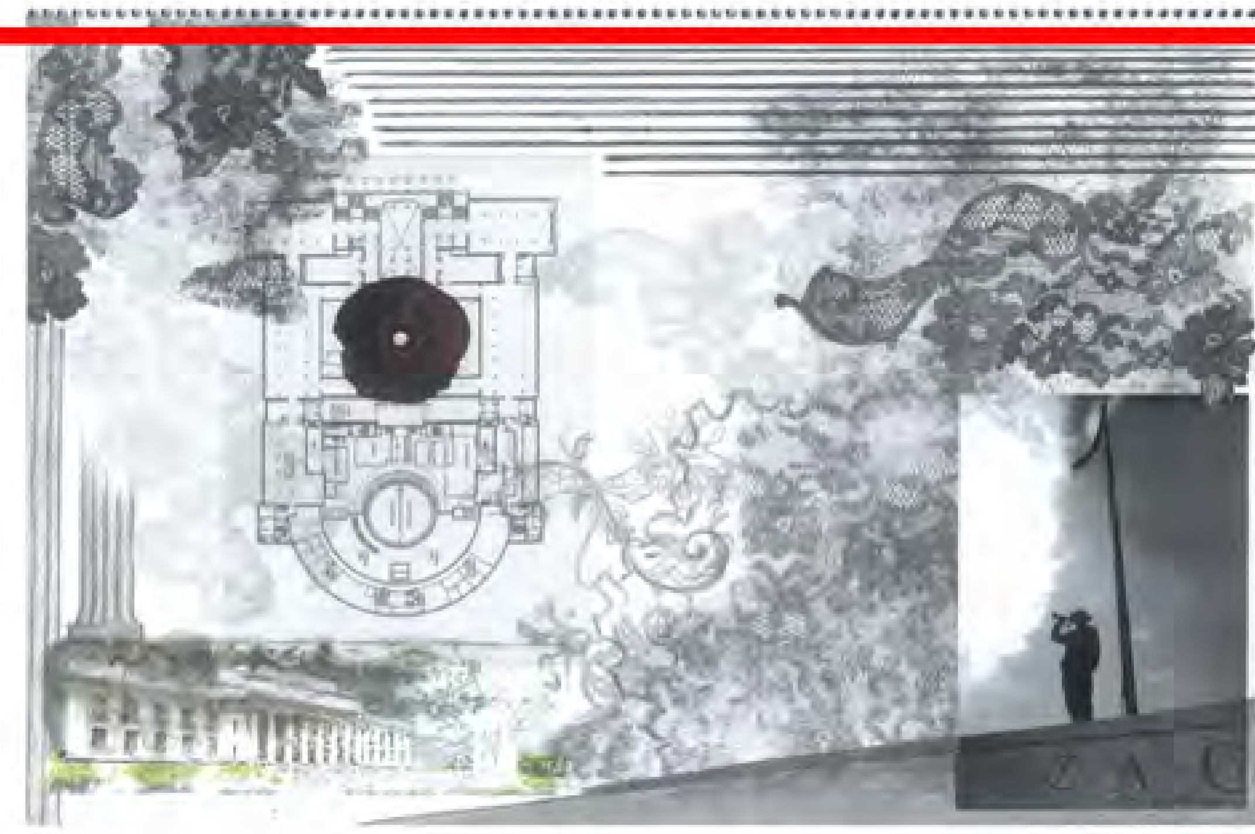
To support internal assessment

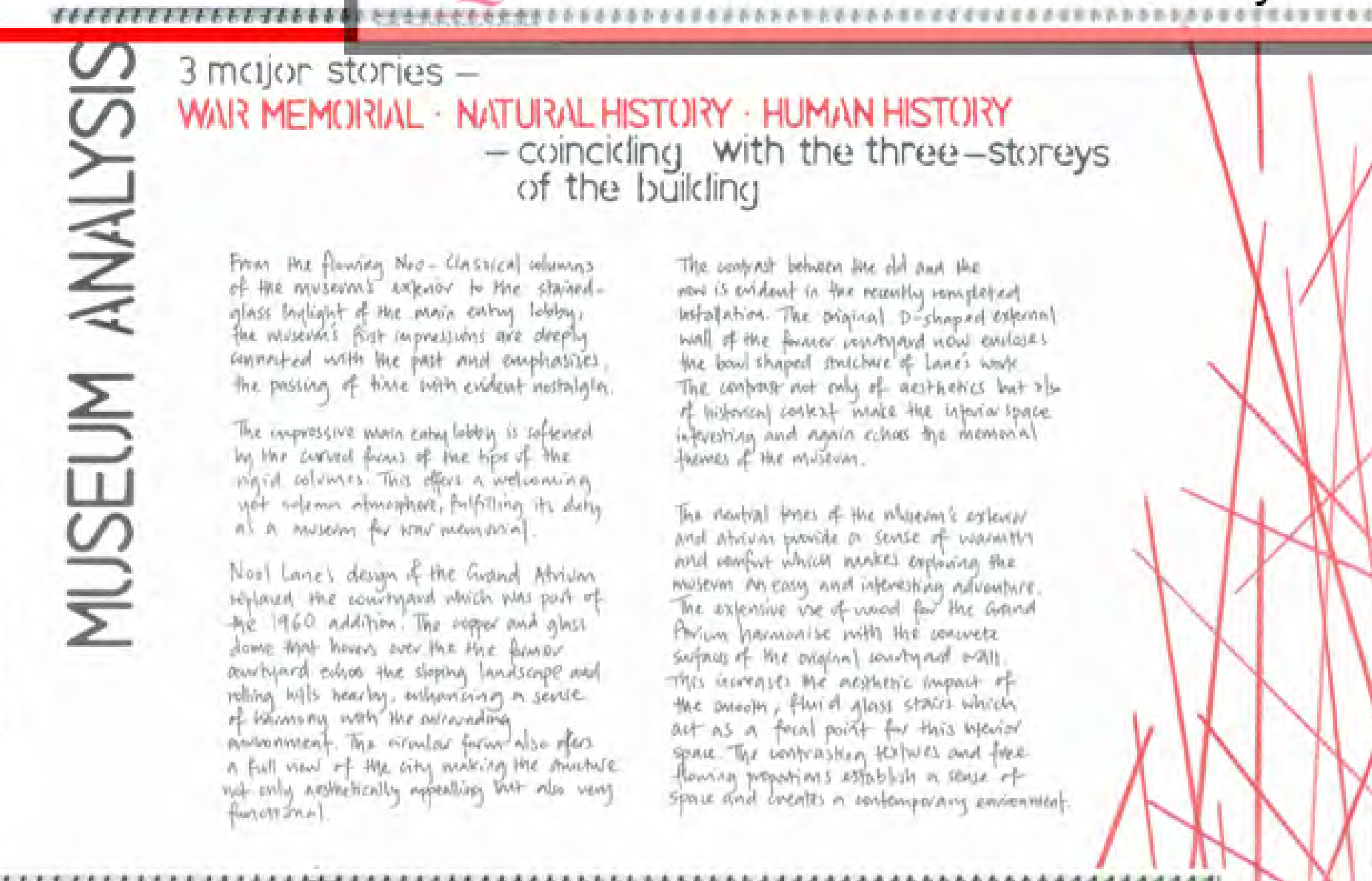
	Grade Boundary: Low Excellence
1.	For Excellence, the student needs to effectively resolve a spatial design through graphics practice. This involves: • making informed designer decisions that integrate spatial design knowledge, and understanding of the wider environmental conditions and human factors related to the design context • communicating a spatial design that is justified in terms of the significant opportunities and constraints. This student has shown some understanding of the significant opportunities and constraints surrounding the site and style of architecture and justification of decisions to resolve the spatial design (1). Designer decisions which integrate spatial design knowledge, and some understanding of the wider environmental conditions are shown throughout the sketching and annotation (2). For a more secure Excellence, the student could show further understanding and integration of wider environmental conditions and human factors to better reflect the first criterion of the standard.

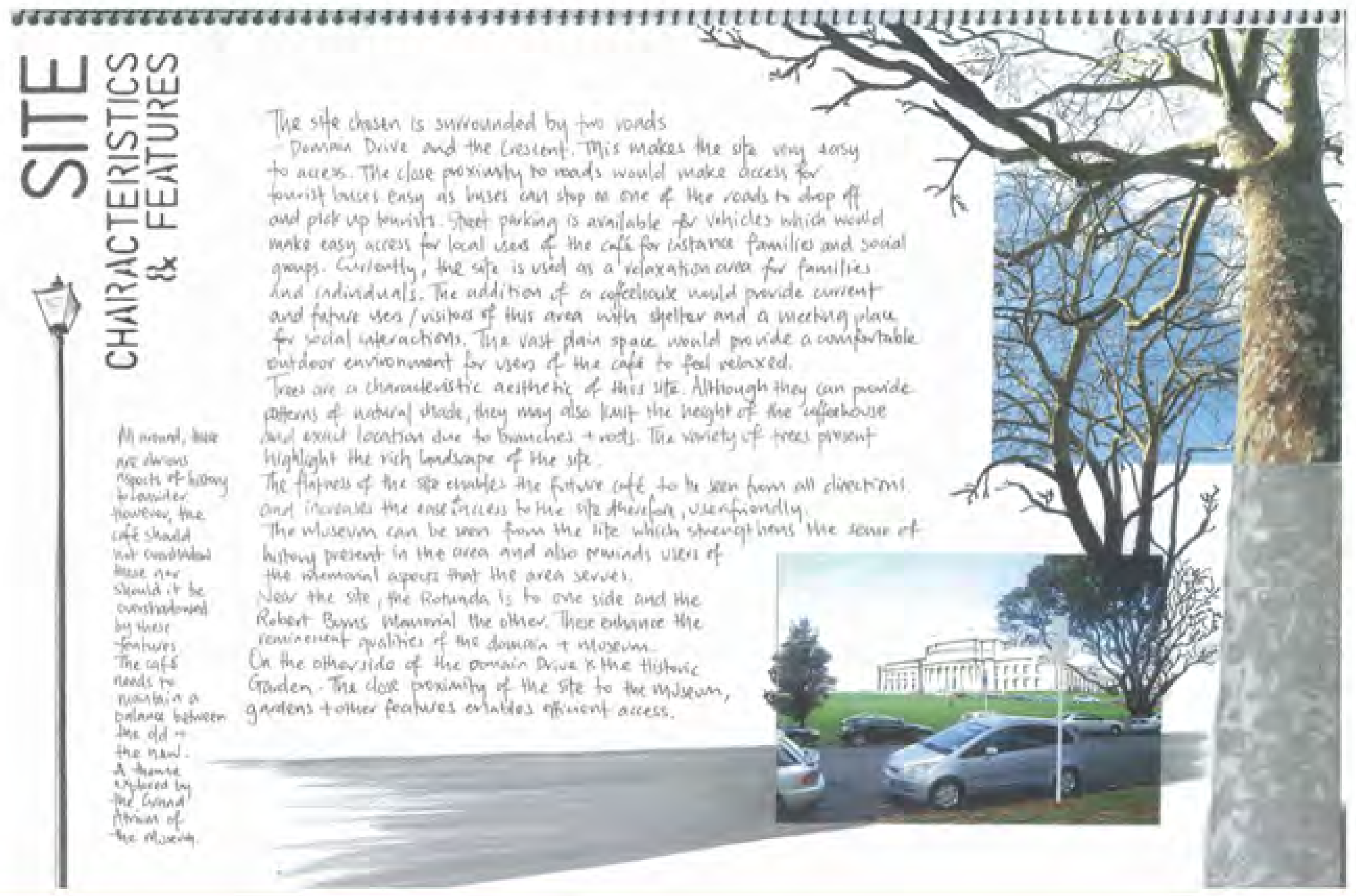
Student 1 Page 1: Low Excellence

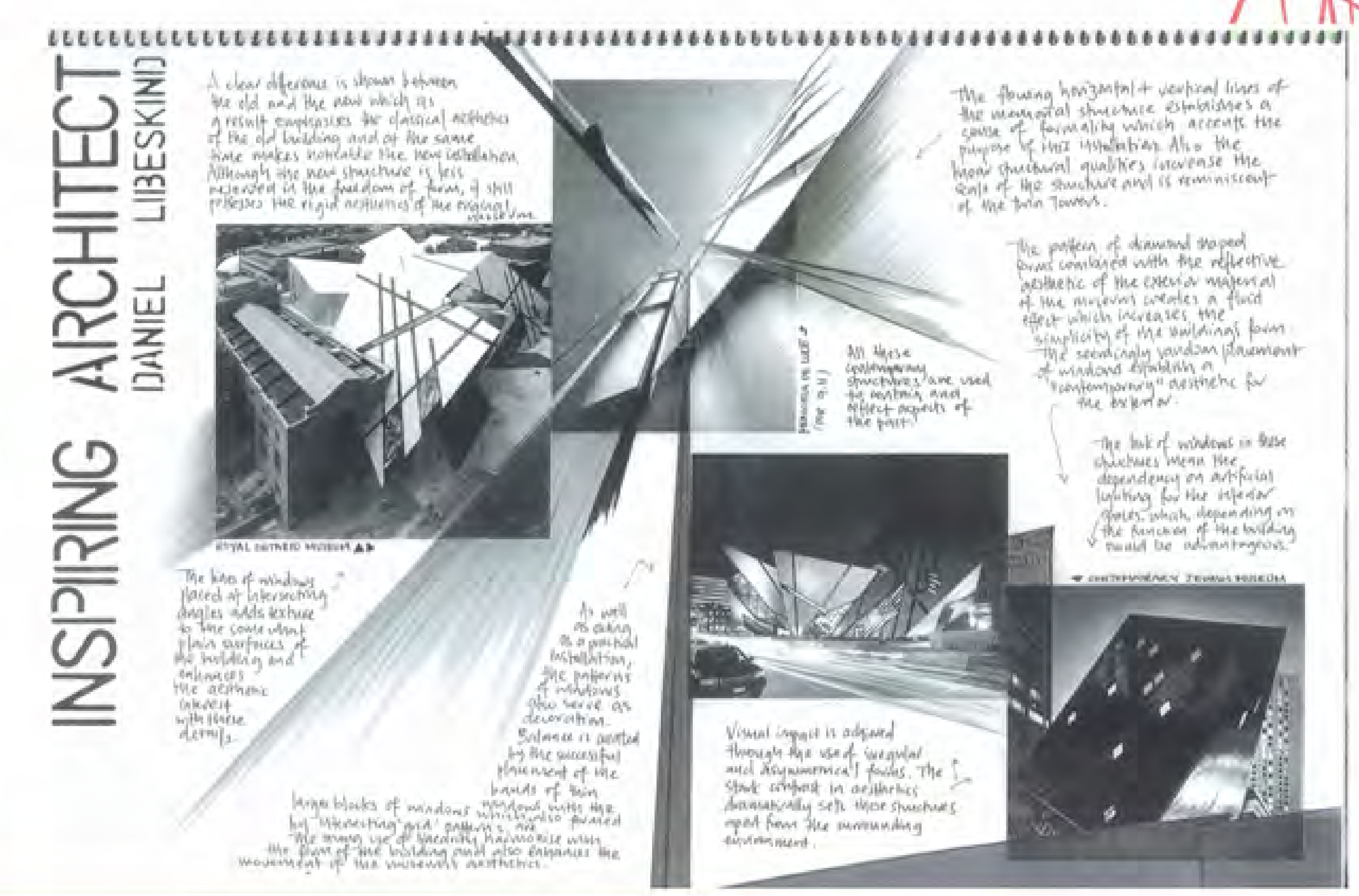
NZQA Intended for teacher use only

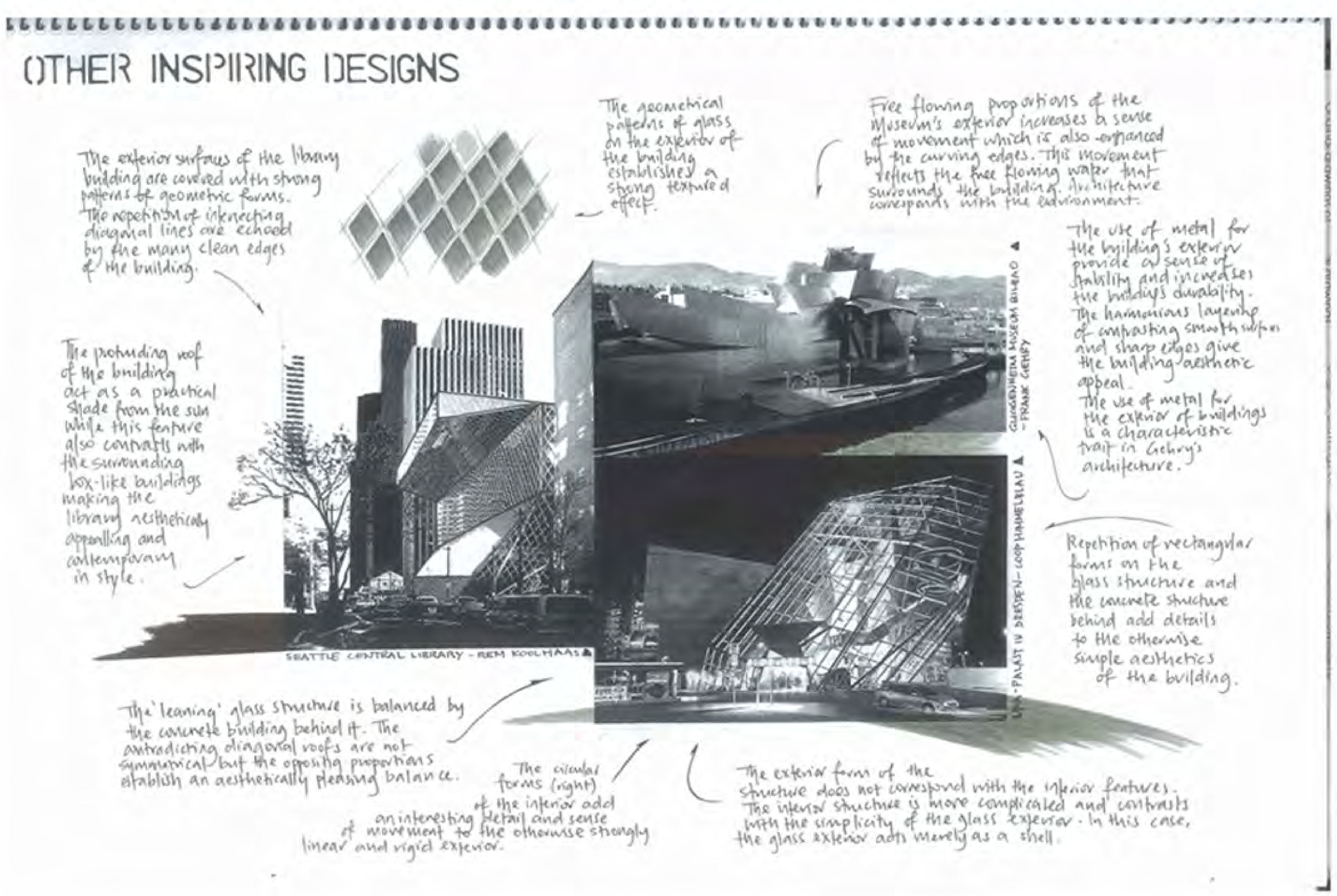
1

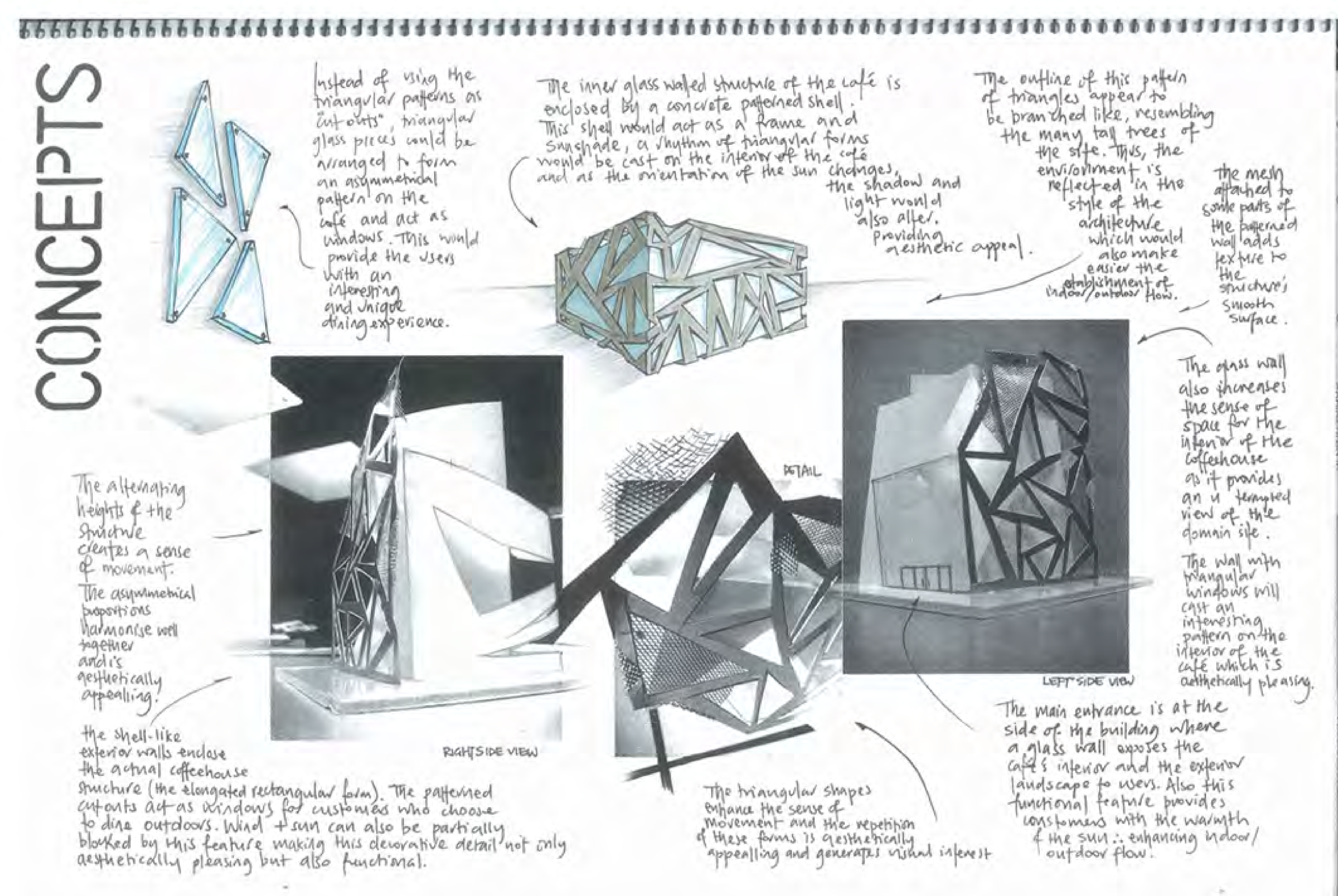




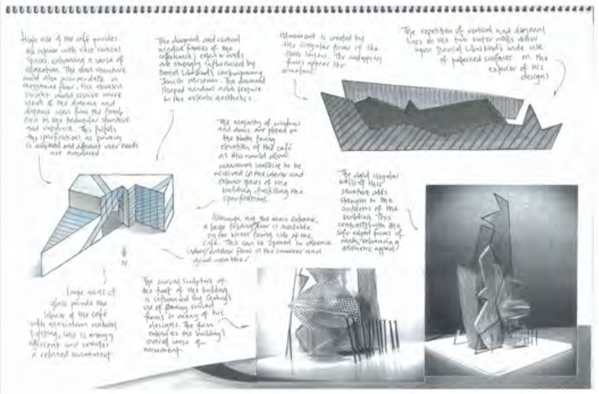


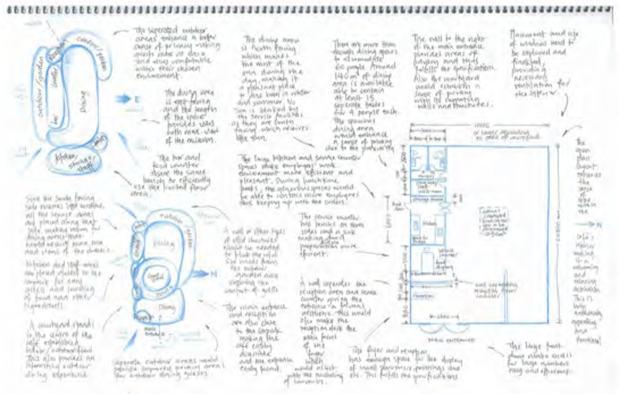


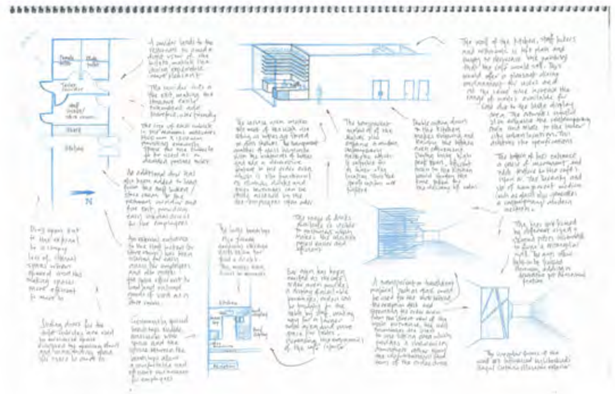


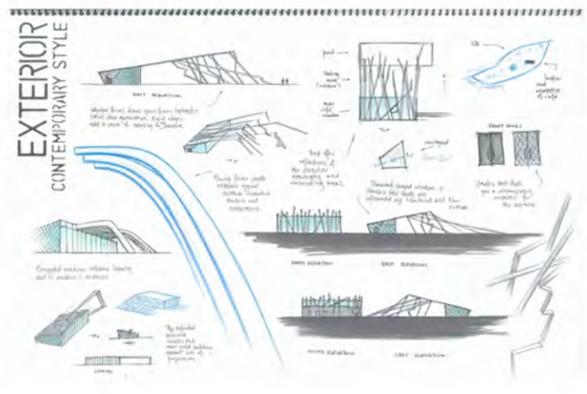


Student 1 Page 2: Low Excellence









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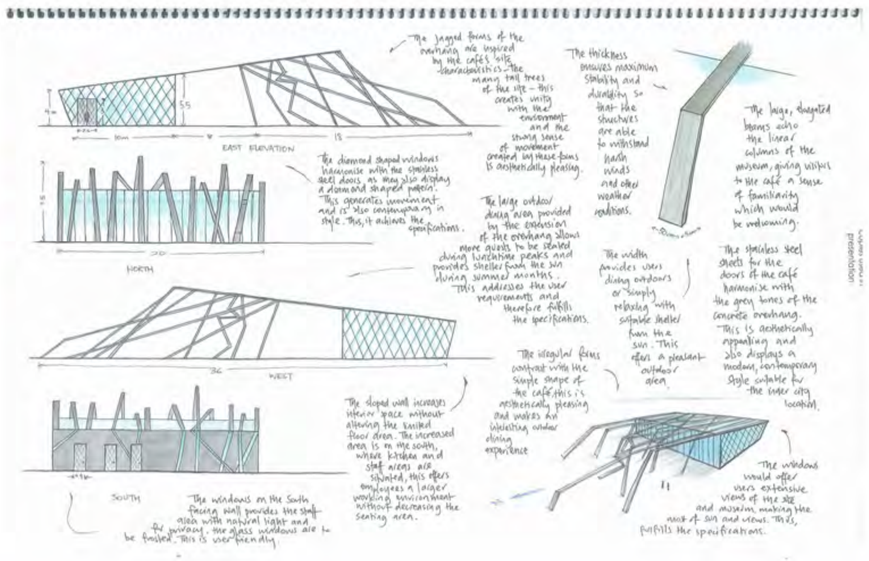
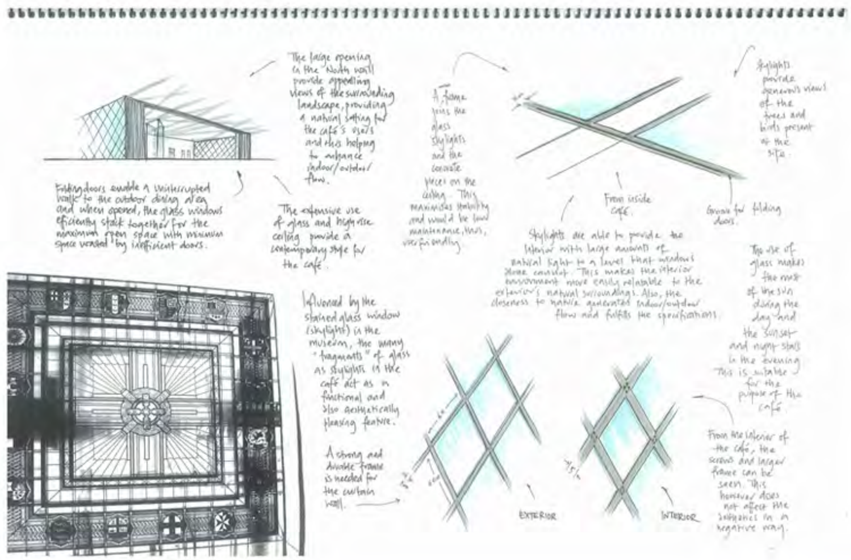
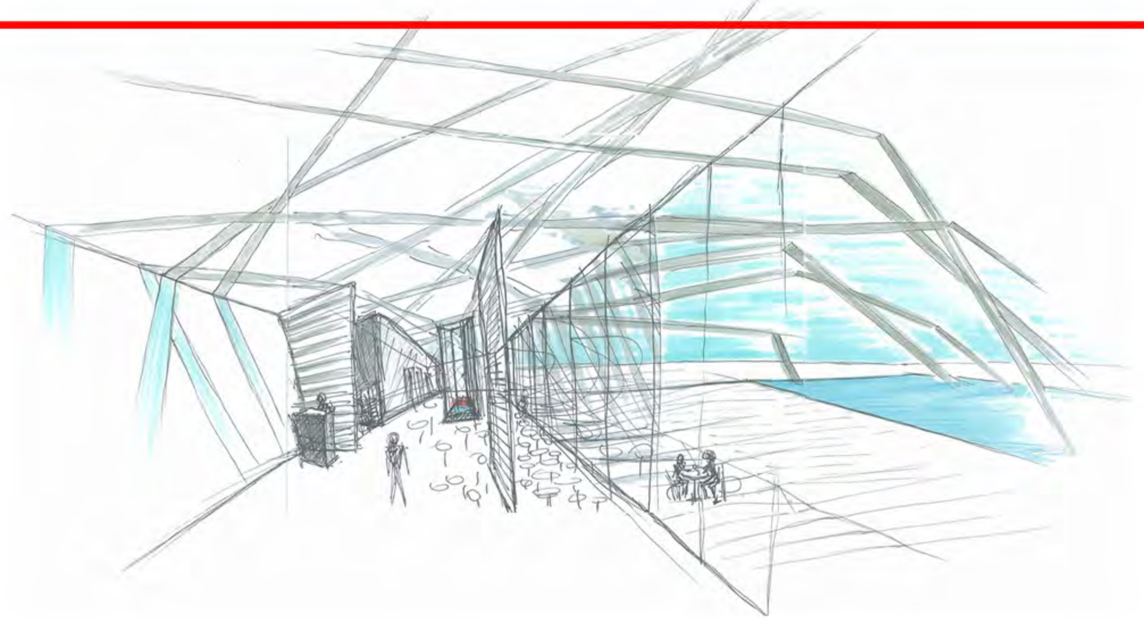
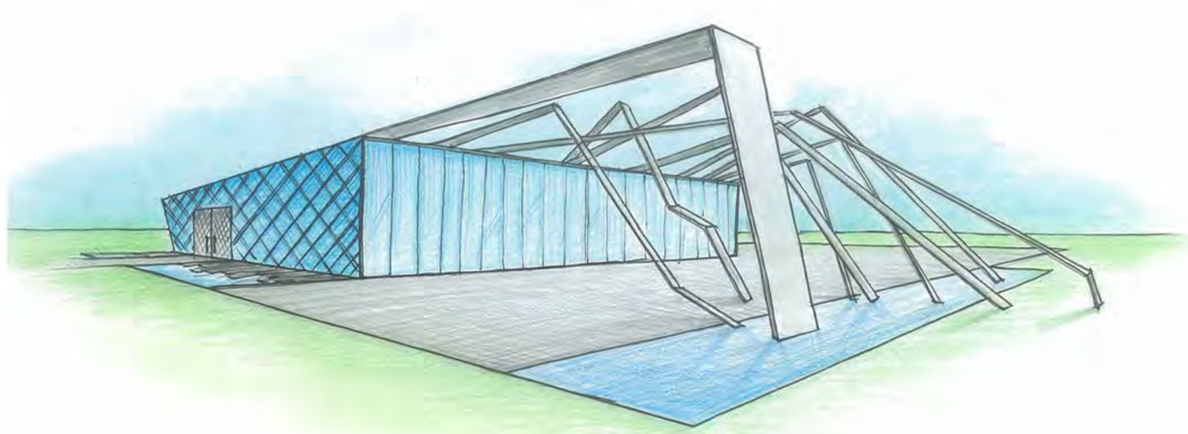


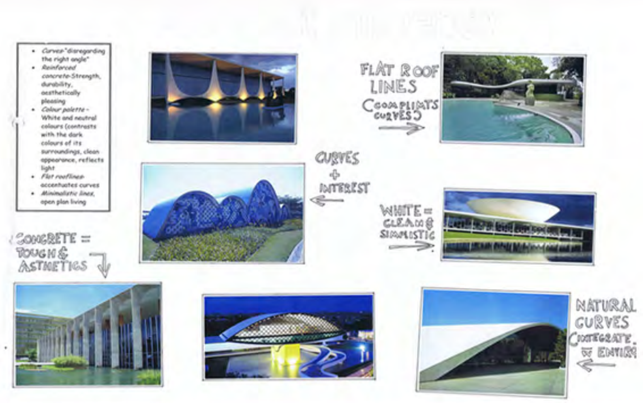


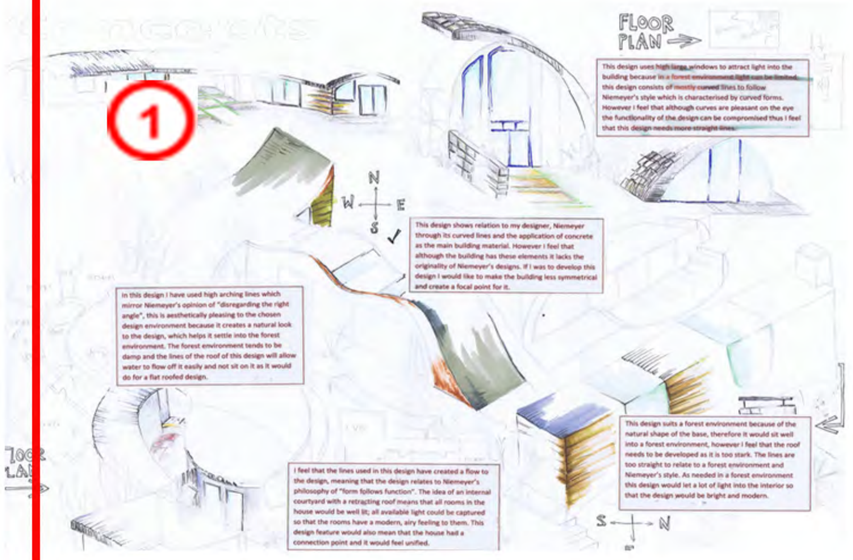


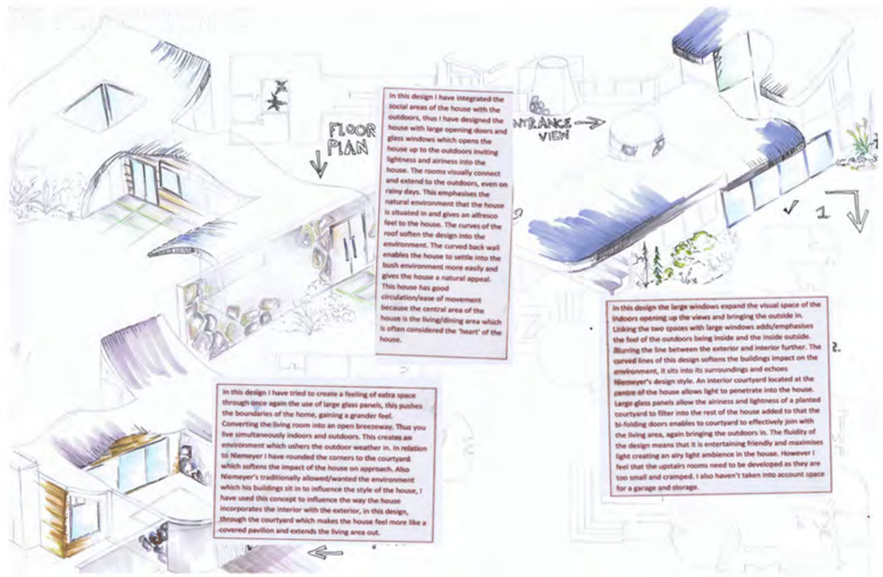


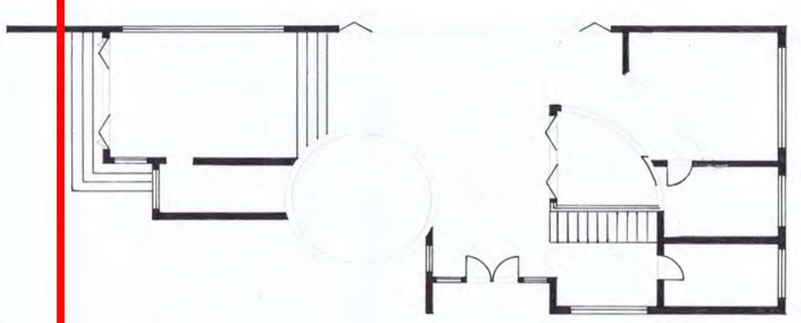
	Grade Boundary: High Merit
2.	For Merit, the student needs to clearly resolve a spatial design through graphics practice. This involves: • exploring the wider environmental conditions and human factors related to the design context to identify opportunities and constraints • communicating a spatial design that addresses significant opportunities and constraints. The student has explored some of the wider environmental conditions and human factors related to the design context (1). The student's visual and written communication of the design ideas starts to justify the design solution of the building against the significant opportunities and constraints identified throughout the design process (2). The student makes good use of a mock-up by addressing and evaluating further significant opportunities and constraints (2). To reach Excellence, there would need to be further evidence of informed decisions which integrate spatial design knowledge. More investigation of the size and flow of the building would help connect the design thinking and give more flow to the design process.

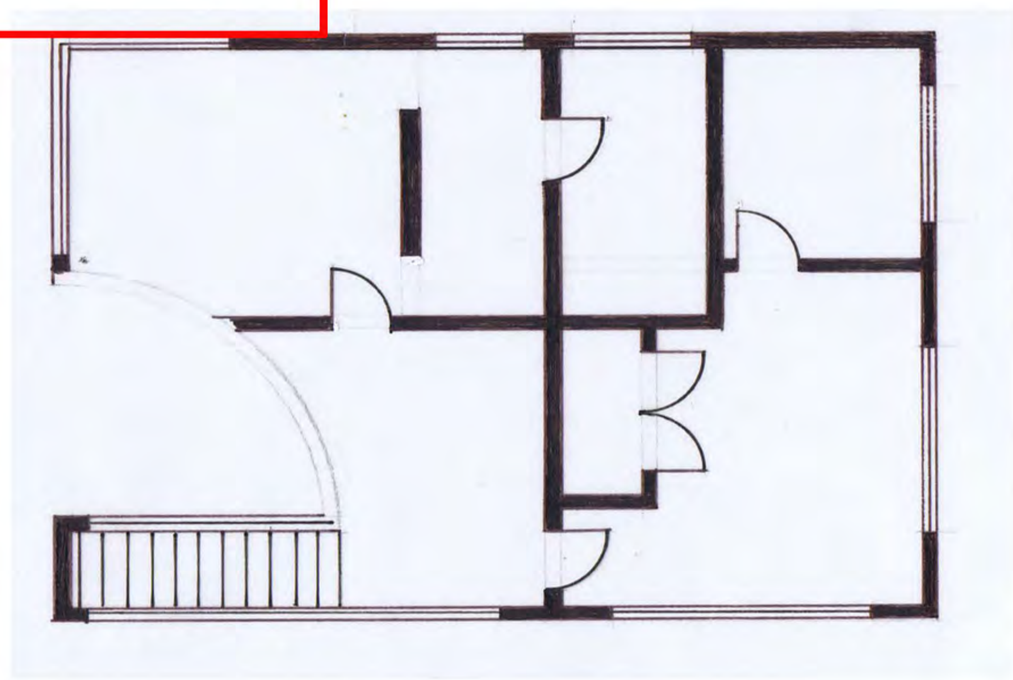
Student 2 Page 1: High Merit

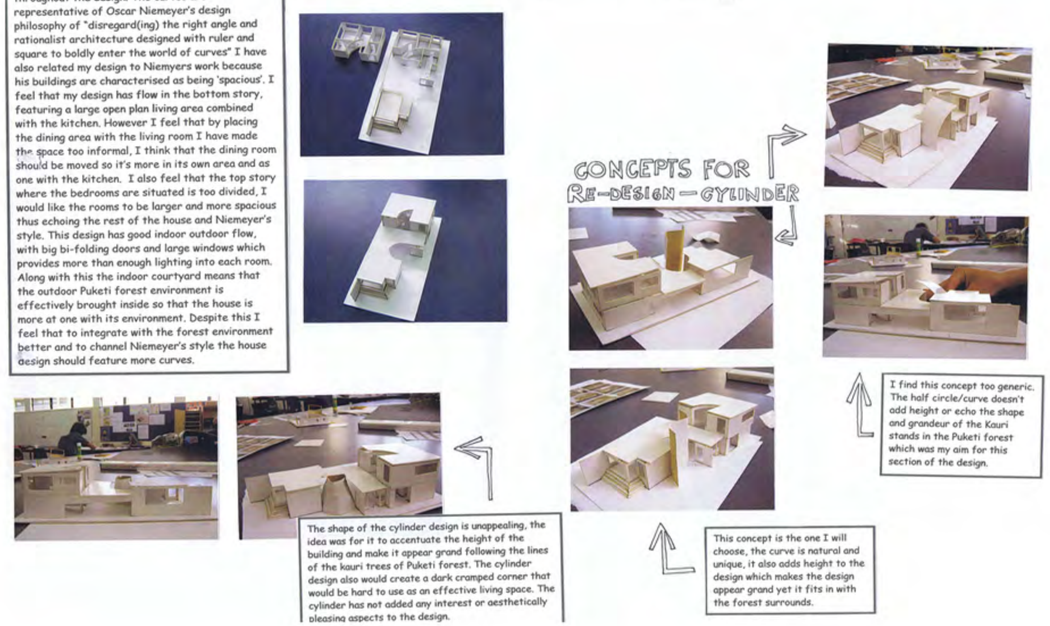




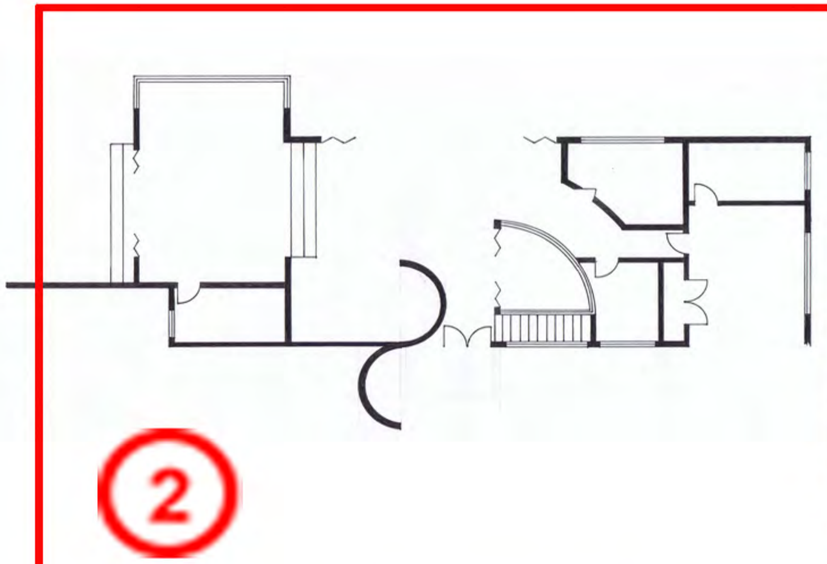








Student 2 Page 2: High Merit



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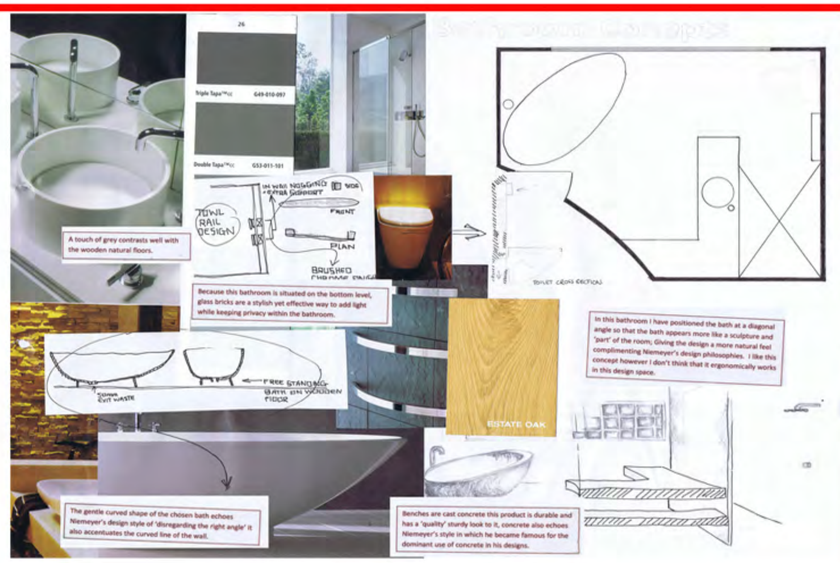
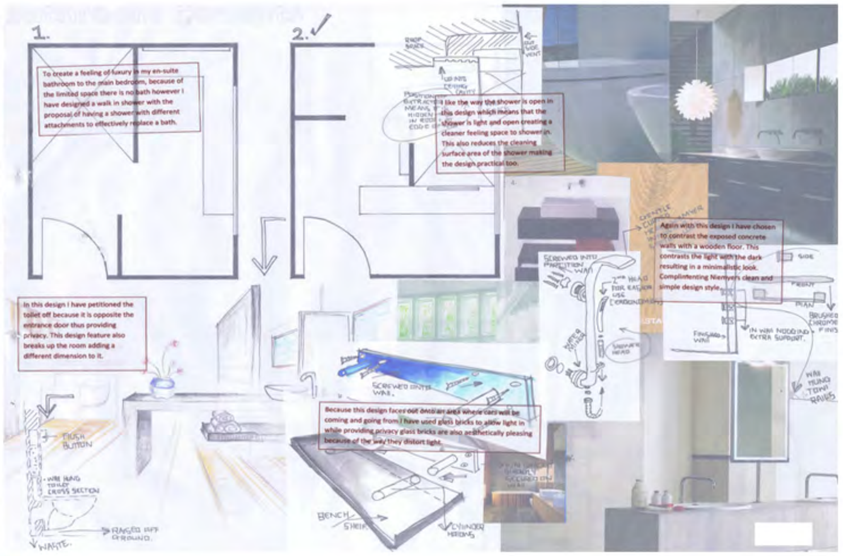
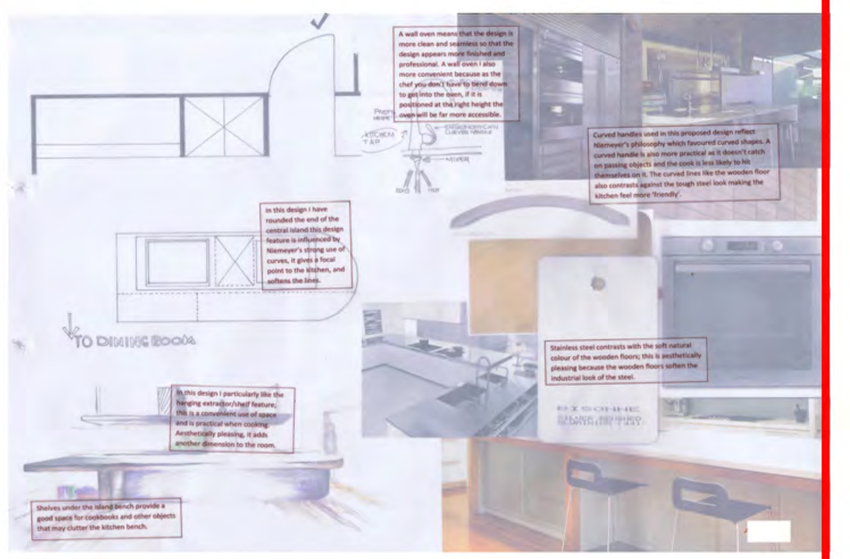
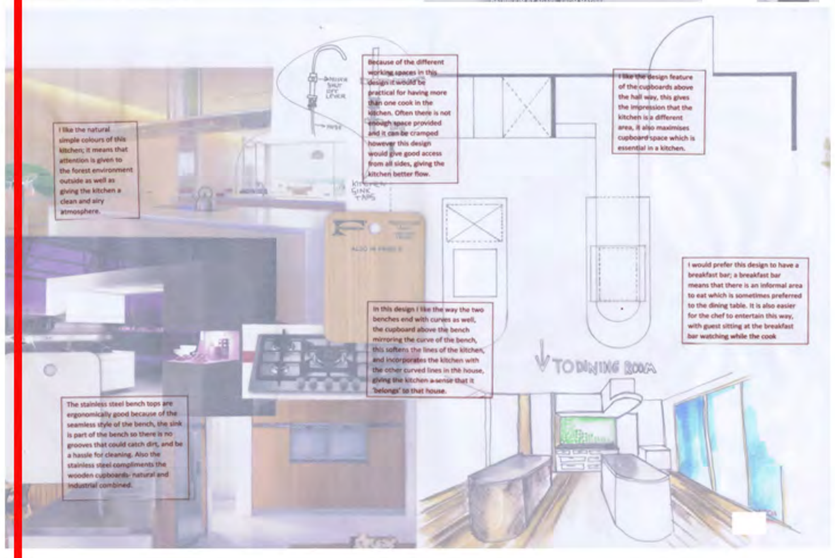
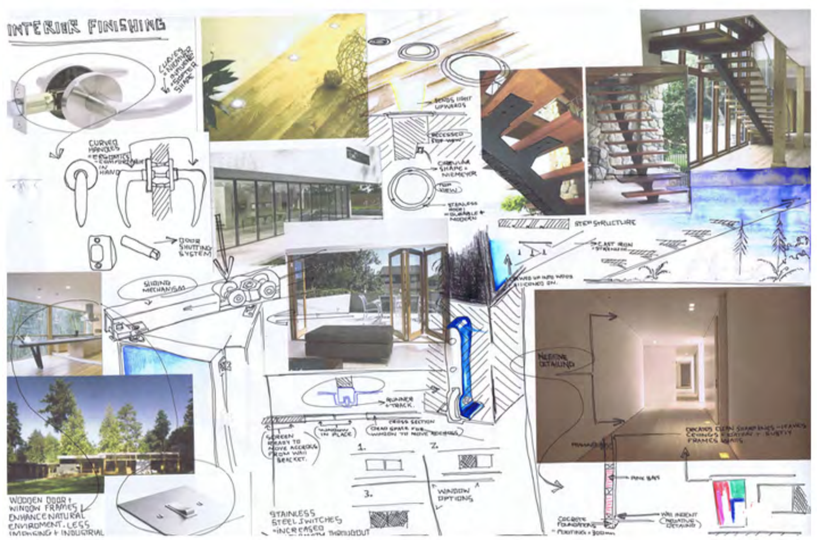








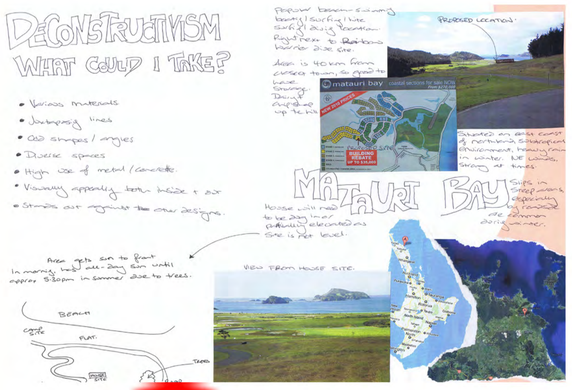


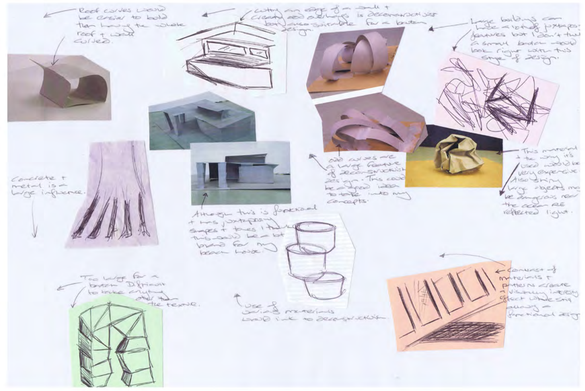
Evaluation- Design brief: Suit the environment of the Puketi forest, relate to Oscar Niemeyer, lounge, dining, bedrooms, highlights views, suitable materials.

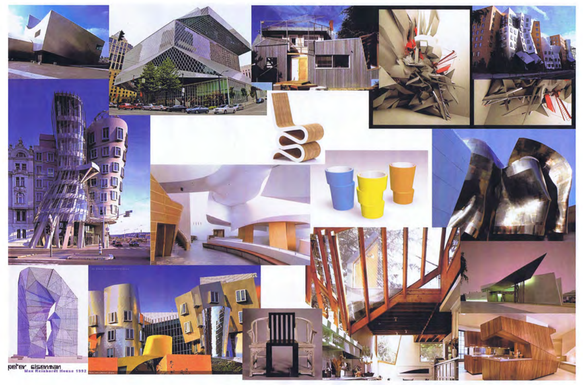
In my design process I have been careful to make sure that the end product would sit comfortably and not impose on the natural Puketi forest environment. I believe I have met this specification through the use of split levels and split roof levels with softens the look of the house and make it appear to gradually grow in comparison to one large block. I feel that having chosen Niemeyer as my design influence also helped me maintain the design brief as his dominant use of curves and design philosophies of 'disregarding the right angle' forced me to continually evaluate the shapes I used to form my design thus producing a more natural shape to the house which enables it to more easily fit into the Puketi forest environment. In particular the large curved stone wall which breaks up the house gives it a focal point and enables the house to 'reach out' into its surrounding environment. The use of stone maintains the natural aesthetics. Along with this the final touches in cladding have enabled this design to both assimilate into its environment while upholding a modern look. The dominant use of wooden cladding relates to the surrounding forest environment, the material, colour, and natural aging process of the product means that it was a good choice in terms of suiting the Puketi forest environment. Emphasising the use of wood in the construction of this house to suit the forest environment is the wooden framing used for doors and windows, this softens the barrier between the indoor and outdoor forest environment, coupled with the large expansive windows means that as an occupant you feel as if you are part of the outdoor environment. Throughout the design process I believe I have stayed true to Niemeyer's theories and design ideals. In my final design I have melded practicality with Niemeyer's love of curves, because while curves are aesthetically pleasing they are often hard to work with practically when the interior needs to be designed along with this building materials become more expensive and the engineering of the building needs to be more thought about.

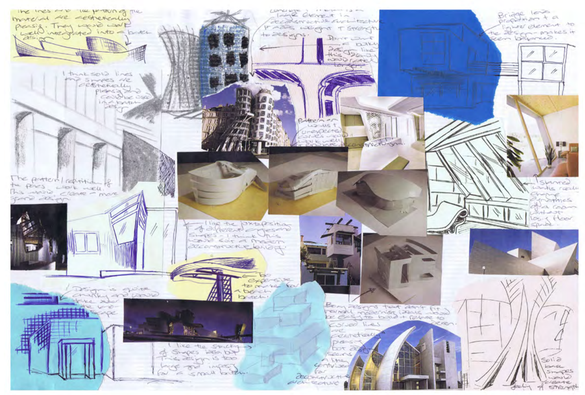
Thus I have reached a compromise I feel with Niemeyer's philosophies of allowing 'function to follow curve' curves are made into features within my design and where possible they are used to soften the appearance of objects in order for the design to sit into its environment better as well. Also Niemeyer's predominant use of reinforced concrete for his designs, a process that was regarded as revolutionary and modern at the time of his dominance in architecture, I have used this material to contrast with the wooden aspects of my design to enable it to feel more solid and long standing as a design. I have also upheld the design brief in terms of providing a lounge space, in my design there is one main open lounge space which opens out through large bifolding doors into the outside, also opens into the interior courtyard and features a 'cozy' corner which is created by the curved wall which runs in the middle of the design. This means that my lounge area caters for all types of weather and has a welcoming and open feeling, it is multi useful. Again I have stuck to the design brief and created a dining area which is adjacent to the kitchen; this means that the preparation of the food is part of the dining experience thus creating a more enjoyable experience. The dining area also has large windows and opens out onto an outside covered dining area which is good for entertaining and gives the eating area a light airy feel. This design has two bedrooms which means the design not so much suited to a large family however the bedrooms are large and spacious and both have their own ensuite. They are situated upstairs away from the living spaces which means that they have privacy and are not affected by too much noise. A separate downstairs bathroom means that guests do not have to travel upstairs and through the occupants bedrooms keeping this area of the house separate. The large windows in this design make the most of the surrounding forest environment, views creating an indoor outdoor fluidity to the design, taking in all aspects of the encompassing forest environment. As mentioned earlier the materials used for this design are relevant to its surroundings, the wooden weatherboards are natural and weather well in what can be a wet environment, concrete cladding is used to contrast this natural look however practically it serves its own cause in being relatively fire proof in a forest environment. Along with this the use of corrugated iron for roofing means that the design has a long lasting easy to clean roof that withholds against many different weather types and is relatively fire retardant which is critical in a forest environment. Altogether I am confident I have met the design brief specifications.

	Grade Boundary: Low Merit
3.	For Merit, the student needs to clearly resolve a spatial design through graphics practice. This involves: • exploring the wider environmental conditions and human factors related to the design context to identify opportunities and constraints • communicating a spatial design that addresses significant opportunities and constraints. This student has started to address the significant opportunities and constraints which the design ideas start to explore and refine (1). Throughout the portfolio (1) (2), the student has focussed on some of the environmental conditions and human factors. For example, there is consideration of the materials and the danger of the reflected light near the sea. The ease of building is discussed, and also the interaction that the building has with the landscape it is situated in. The student has used spatial design knowledge throughout the portfolio from bubble diagrams to computer generated images of the resolved design (1) (2). For a more secure Merit, the student would need to explore more of the wider environmental conditions outside of the immediate design, such as sustainable resources and living solutions.









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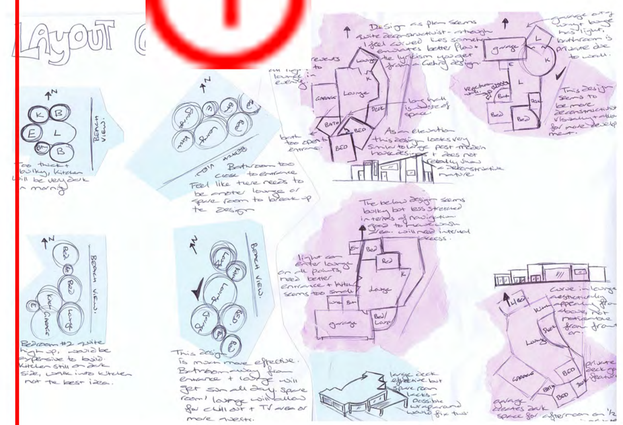
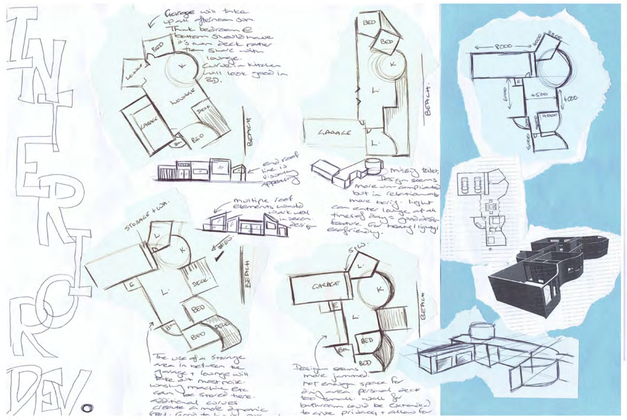
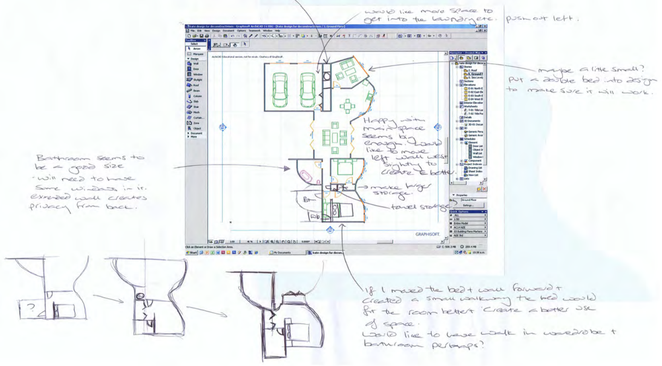
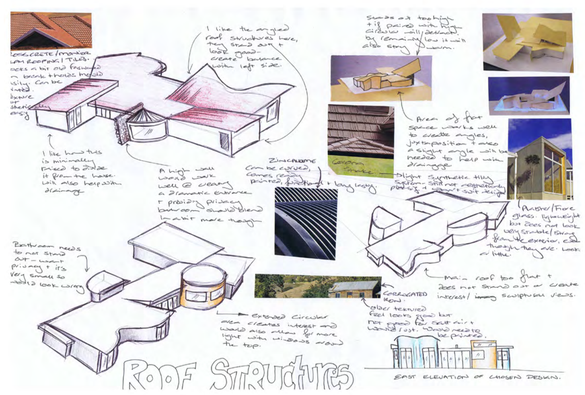
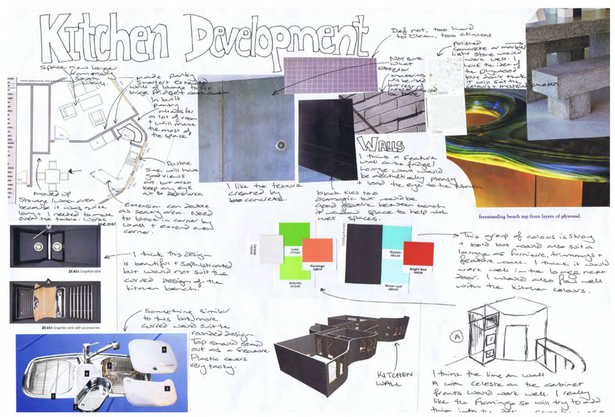
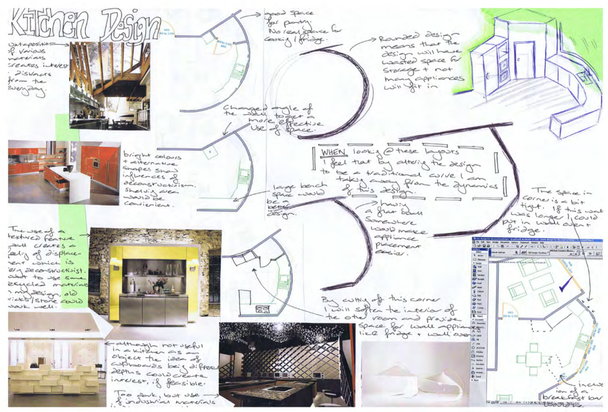


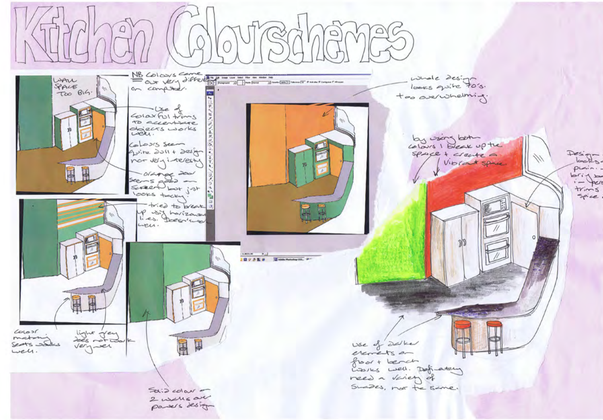


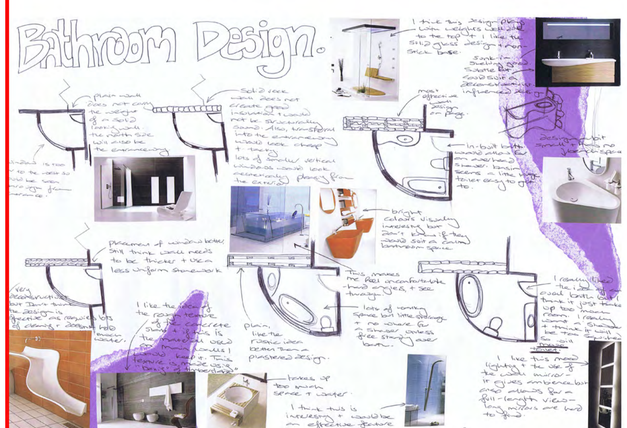


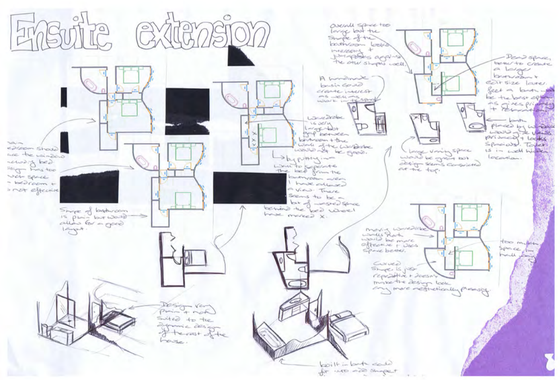


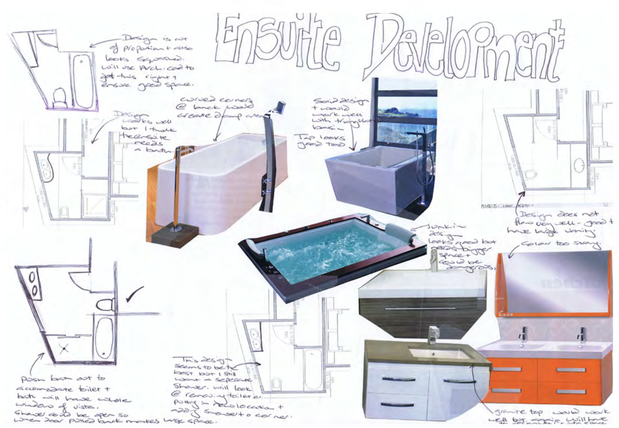


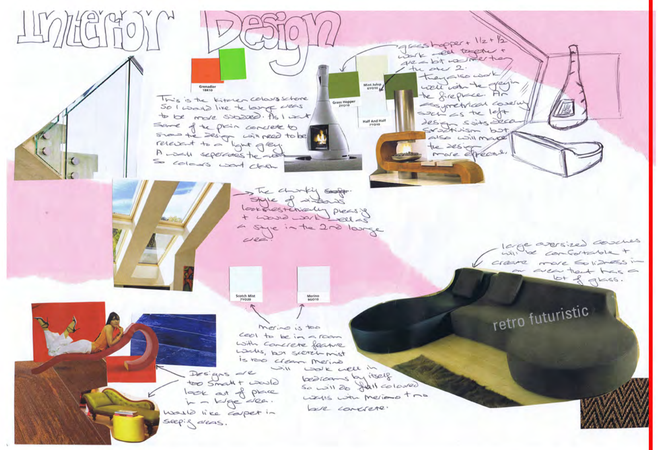




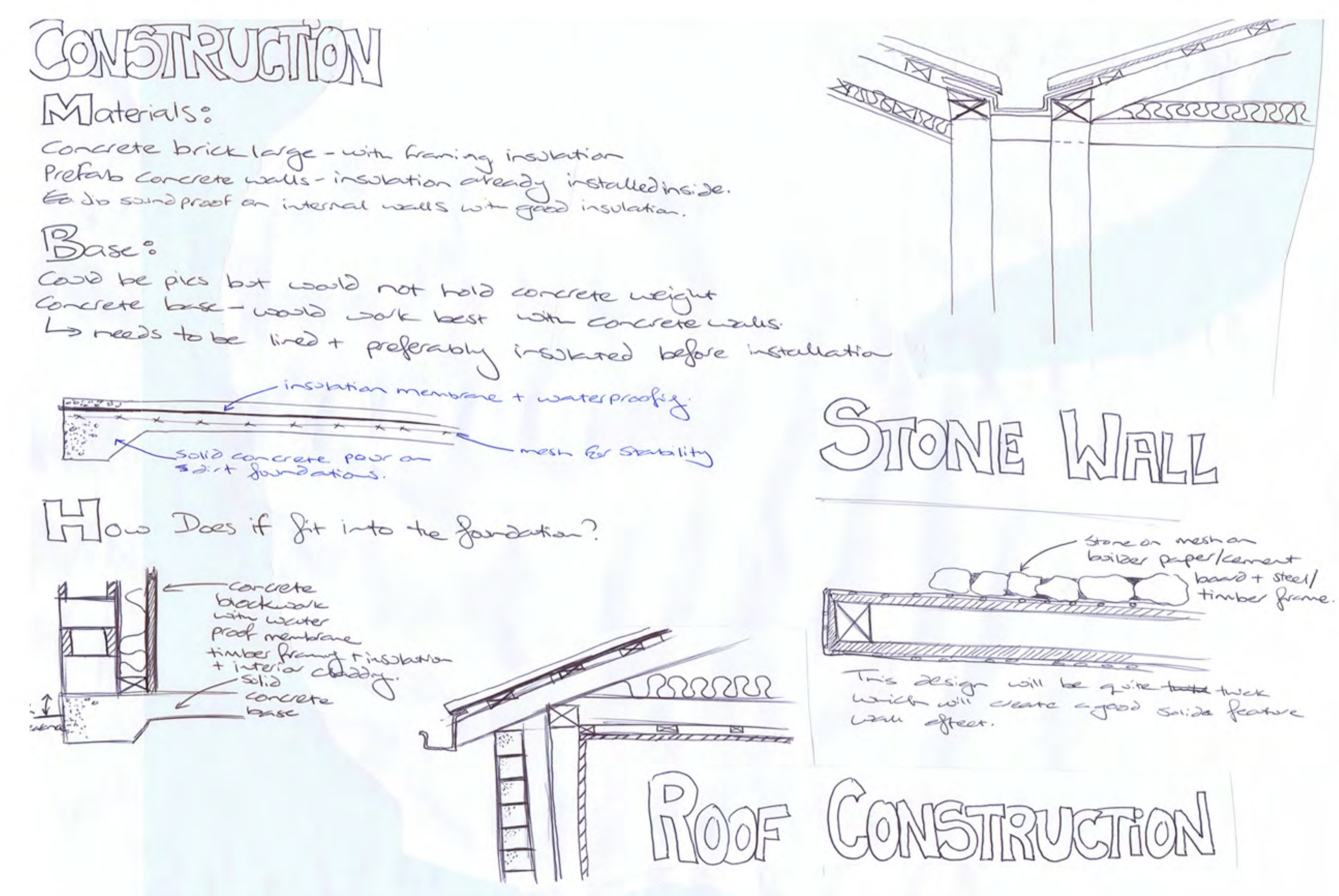




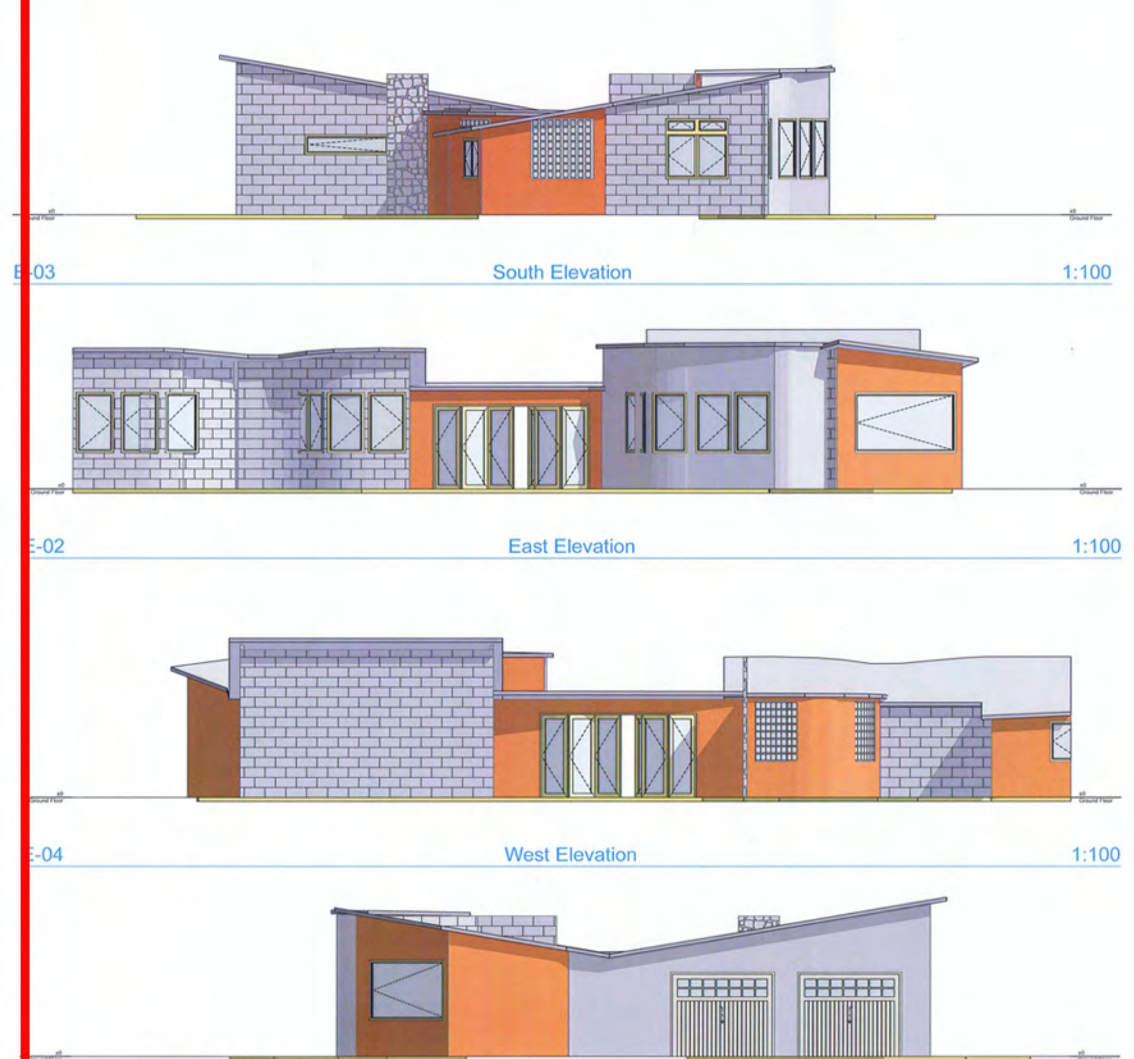





Exterior Design
SHITZEROCK
– Fake rock, lots around region. Not sure if it looks as effective as real rocks
OVERALL I think a mixture of concrete block, concrete panels + painted areas to break up the greyness. Concrete panels will be all flat areas. to keep costs down. with concrete block on curves.
STONE / BRICK
looks more solid than wood but does over-power the structure – in Kerikeri its often used as feature walls rather than the whole space.
→ over powering.
← novel design, rocks are dropped into mesh construction – not very structurally sturdy unless pins are also through.
FINAL SOLUTION
*ORANGE is too bright but mid brown is too brown. Something in between would be good.
CONCRETE BLOCK
can have a variety of textures, as below image shows.
Brick, especially aged, looks good but I don't think it will add any thing visually.
ZINC PLATING
Very expensive, looks good but not good for warm location as will trap heat.
CONCRETE PANELS
Strong, can be pre-cast, can be painted + plastered if don't like the raw look.
(Deconstructivism uses raw materials


CONSTRUCTION
Materials:
Concrete brick large – with framing insulation
Prefab concrete walls – insulation already installed inside.
Base:
Could be piles but would not hold concrete weight
Concrete base – would work best with concrete walls.
↳ needs to be lined + preferably insulated before installation
insulation membrane + waterproofing
Solid concrete pour on dirt foundations.
mesh for stability
How Does it fit into the foundation?
concrete blockwork with water proof membrane
timber framing + insulation + interior cladding.
Solid concrete base
STONE WALL
Stone on mesh on builder paper/cement board + steel/timber frame.
This design will be quite thick which will create a good solid feature wall effect.
ROOF CONSTRUCTION


Final Design
Construction
Colour schemes:
Neutrals throughout main part of house
– Vibrant colours in kitchen (stands out).
– feature walls only in kitchen, lounge + bathrooms.
Materials
– Concrete block
– prefab concrete
– Steel framing
– Concrete base
– polished concrete in wet areas + kitchen
– tan/rum cake Smartstrand throughout other areas
– wooden framed entrance + entertainment decks.
– Solid rock wall feature in centre back of house.
– Corrugated iron (grey) Zincalume / colorsteel.
– natural wood framed windows + doors
– wood burner in lounge area – custom made
LOUNGE INTERIOR
USE OF PHOTOSHOP TO DO COLOUR SCHEMES.



ARCHICAD EDUCATION VERSION
GRAPHISOFT

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For
#Client
At #Street
#City
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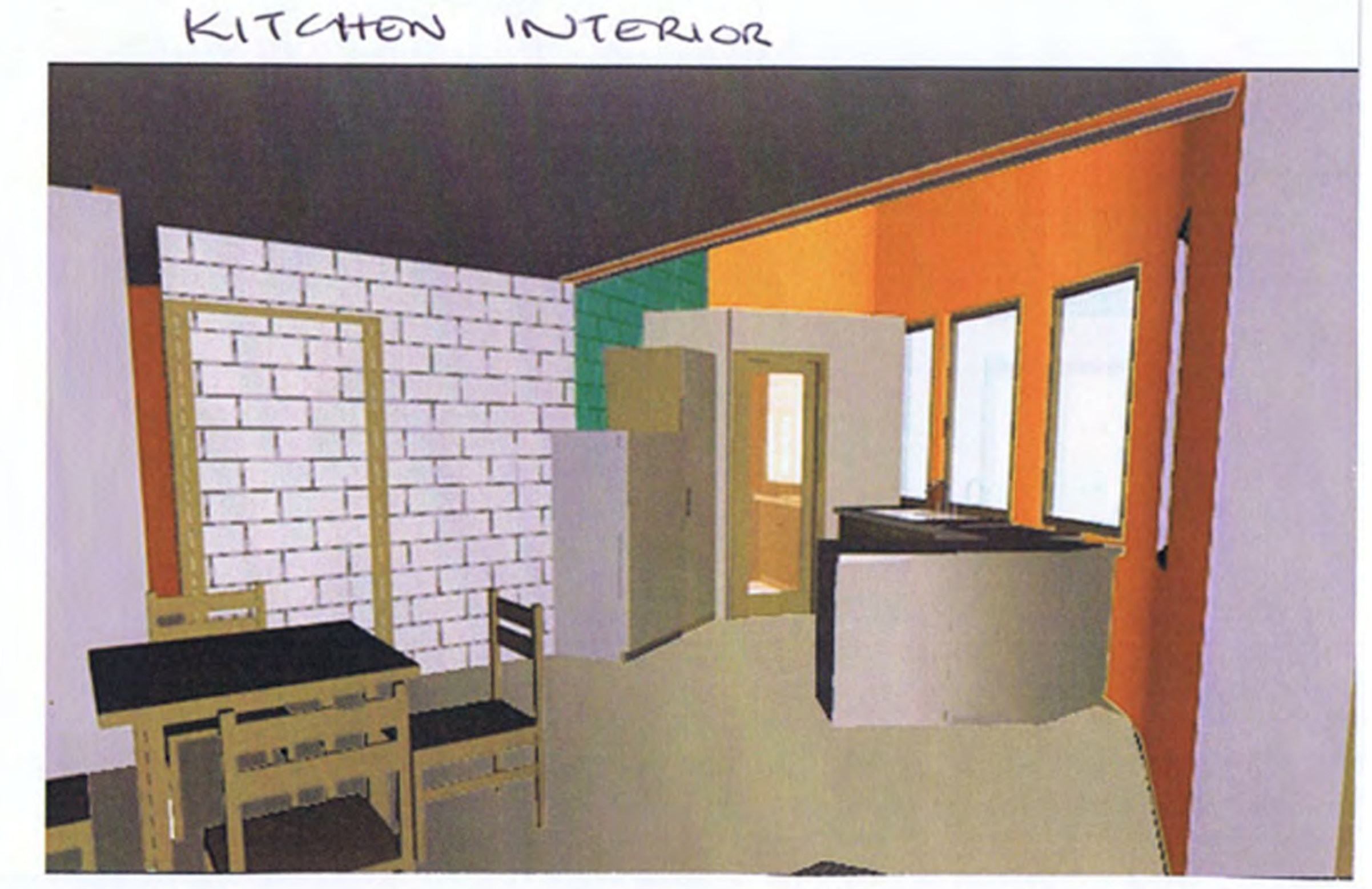
Drawn #CAD Technician
Checked #Architect
Creation Date 09/06/2010
Plot Date 27/06/2012
Drawing Title
Elevations
Drawing Number 301
Scale 1:100
ALL DIMENSIONS TO BE VERIFIED ON SITE

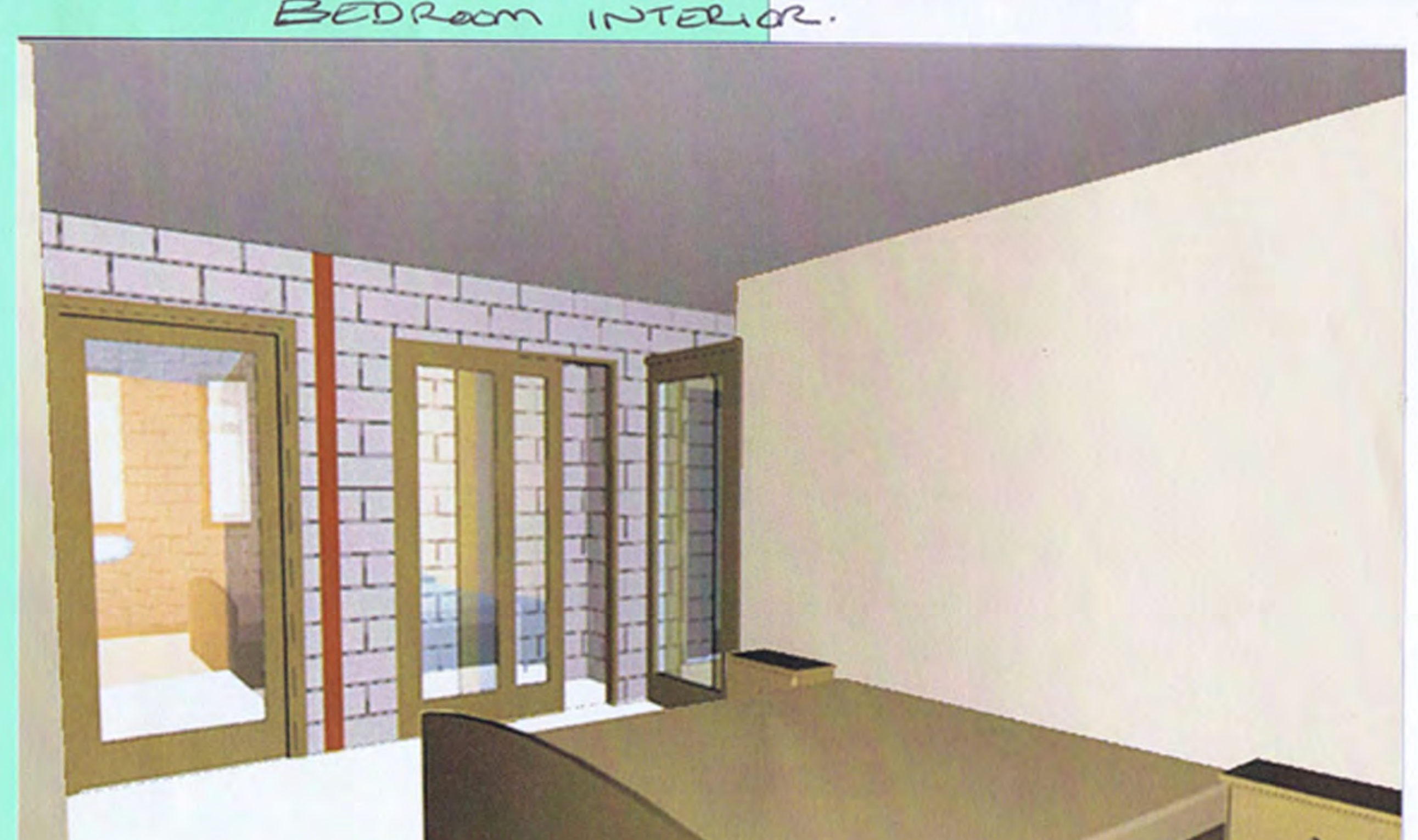
2

KITCHEN INTERIOR

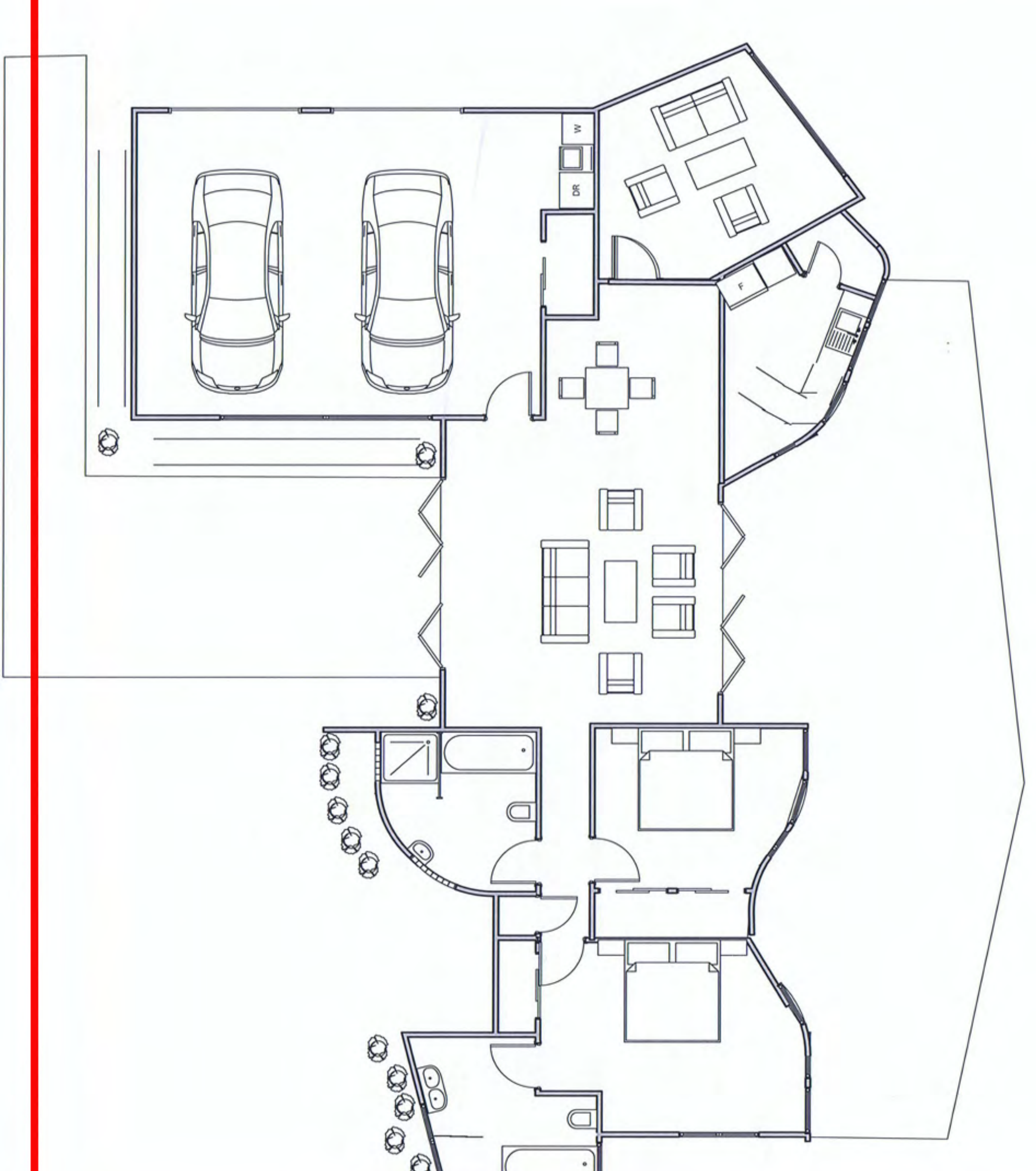


FINAL DESIGN IN SITU.

BEDROOM INTERIOR.



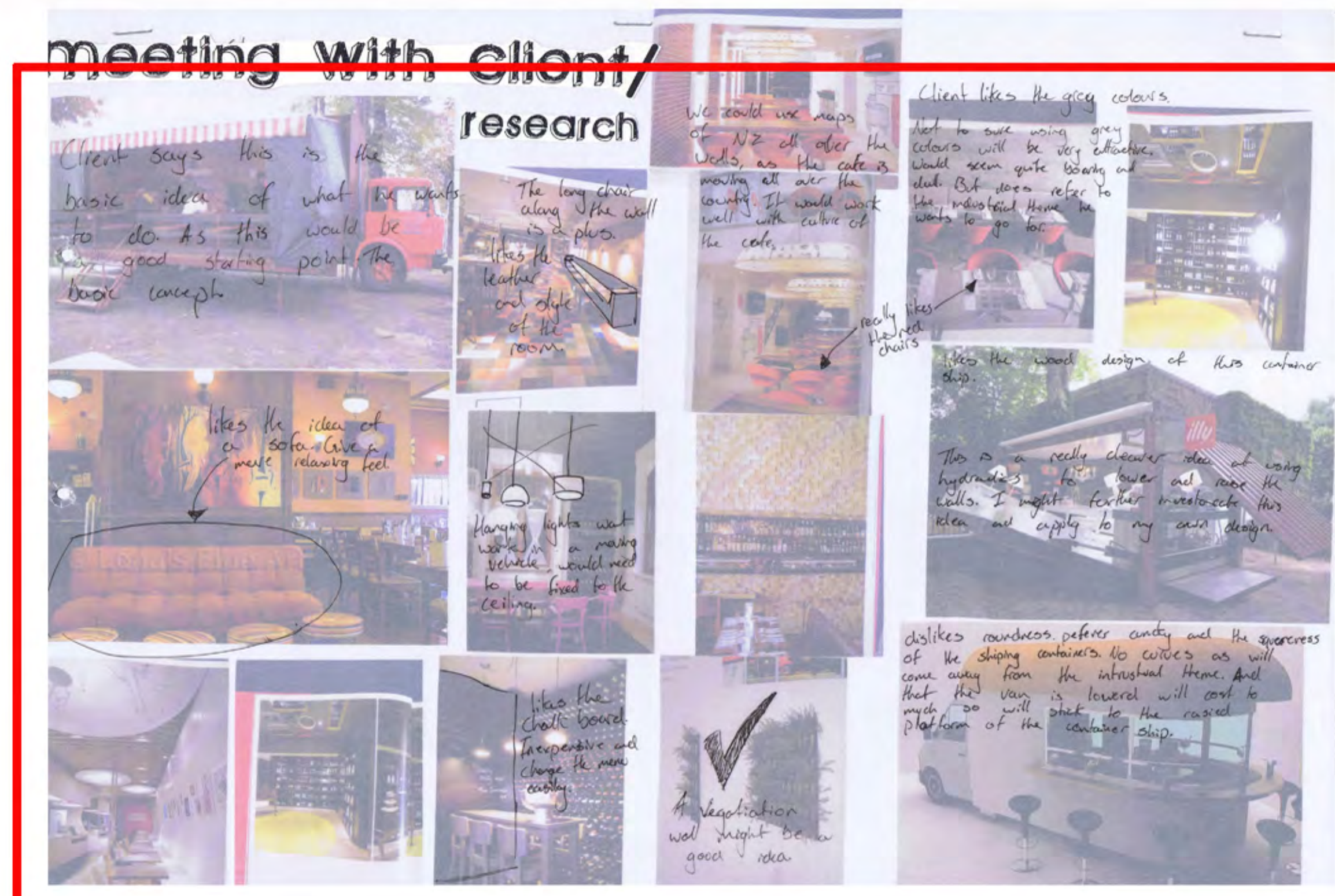
BATHROOM INTERIOR

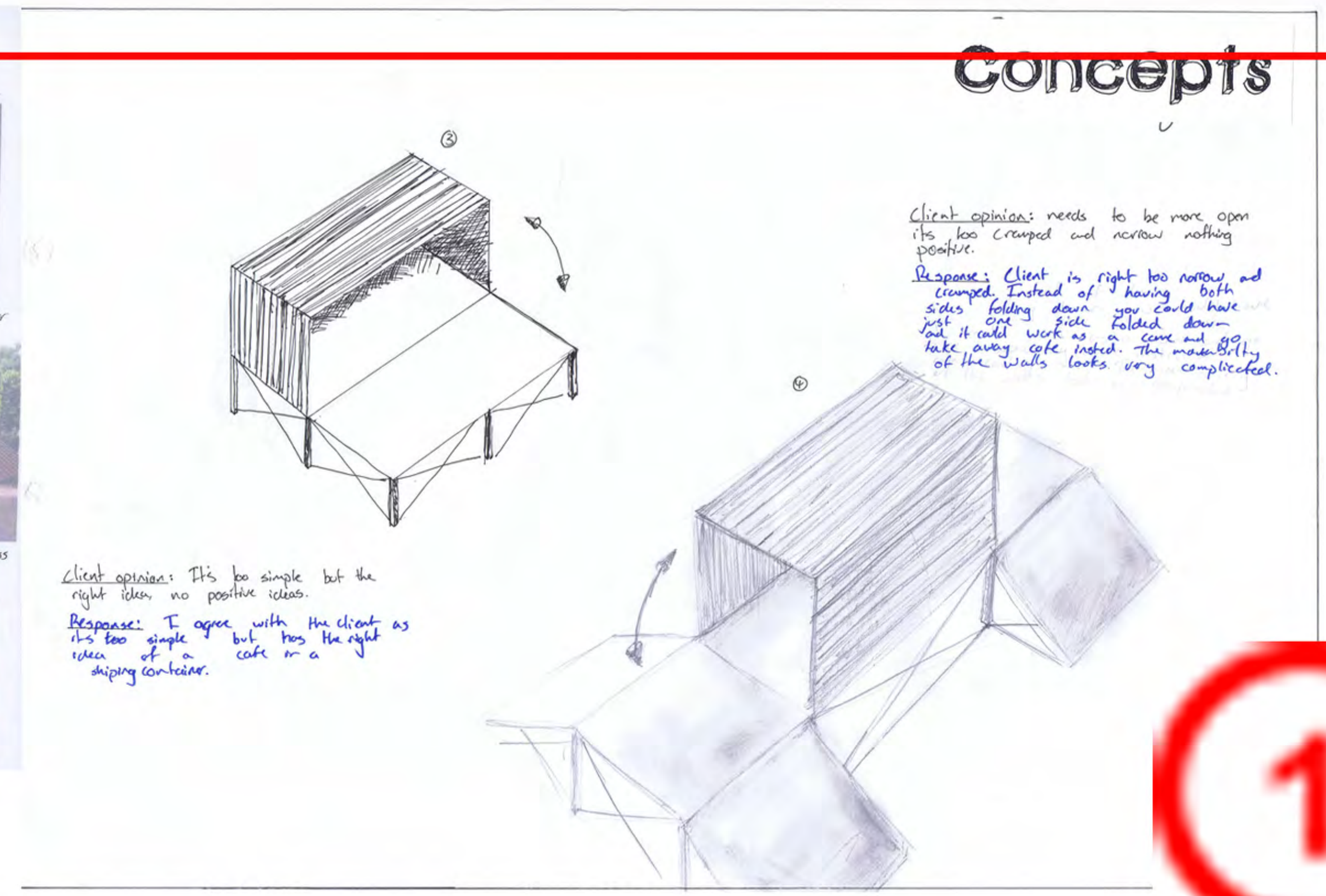


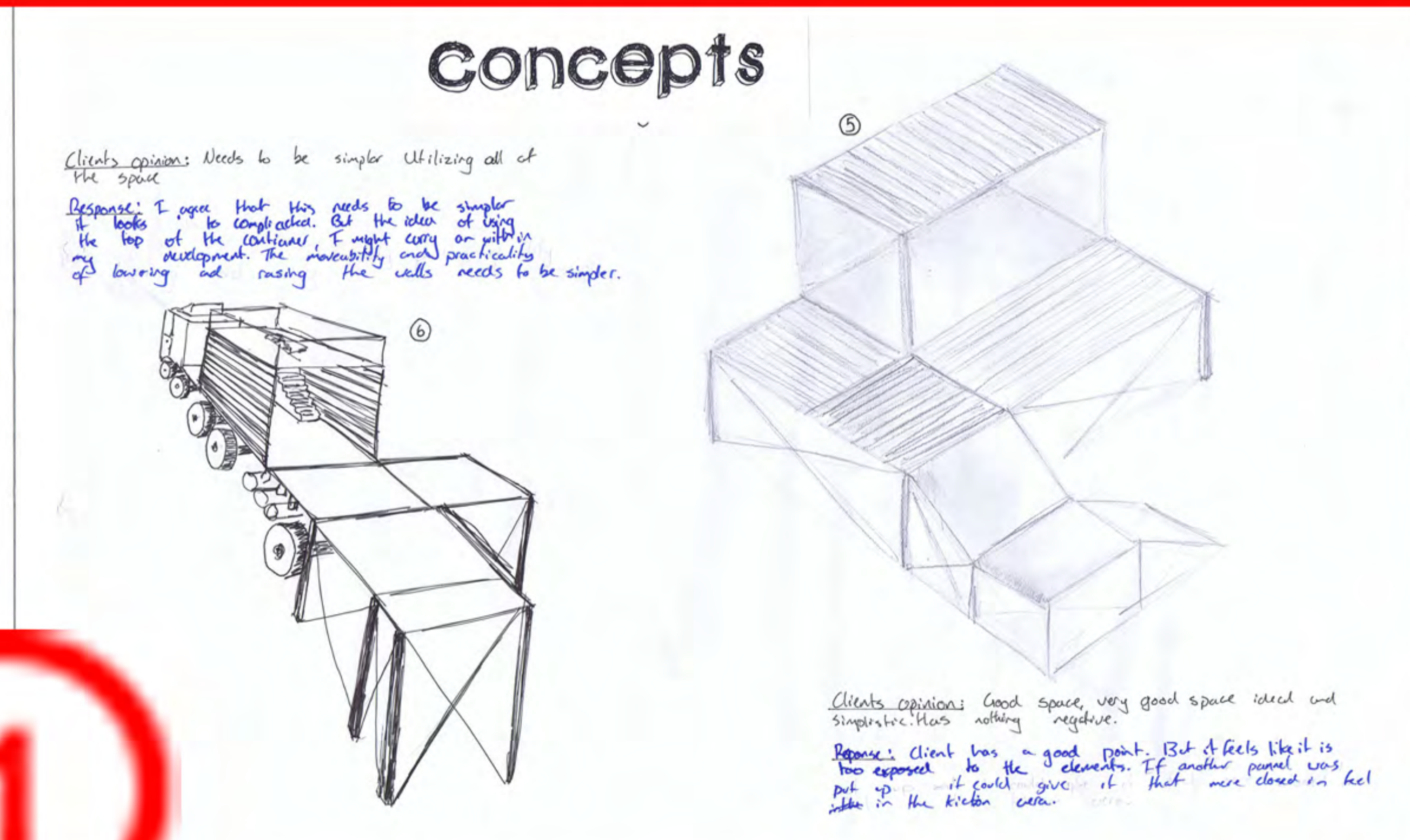
Job Title
#Project Name
For
#Client
At #Street
#City
N
Drawn #CAD Technician
Checked #Architect
Creation Date 09/06/2010
Plot Date 27/06/2012
Drawing Title
Ground Floor Plan
Drawing Number 101
Scale 1:50.2857
ALL DIMENSIONS TO BE VERIFIED ON SITE

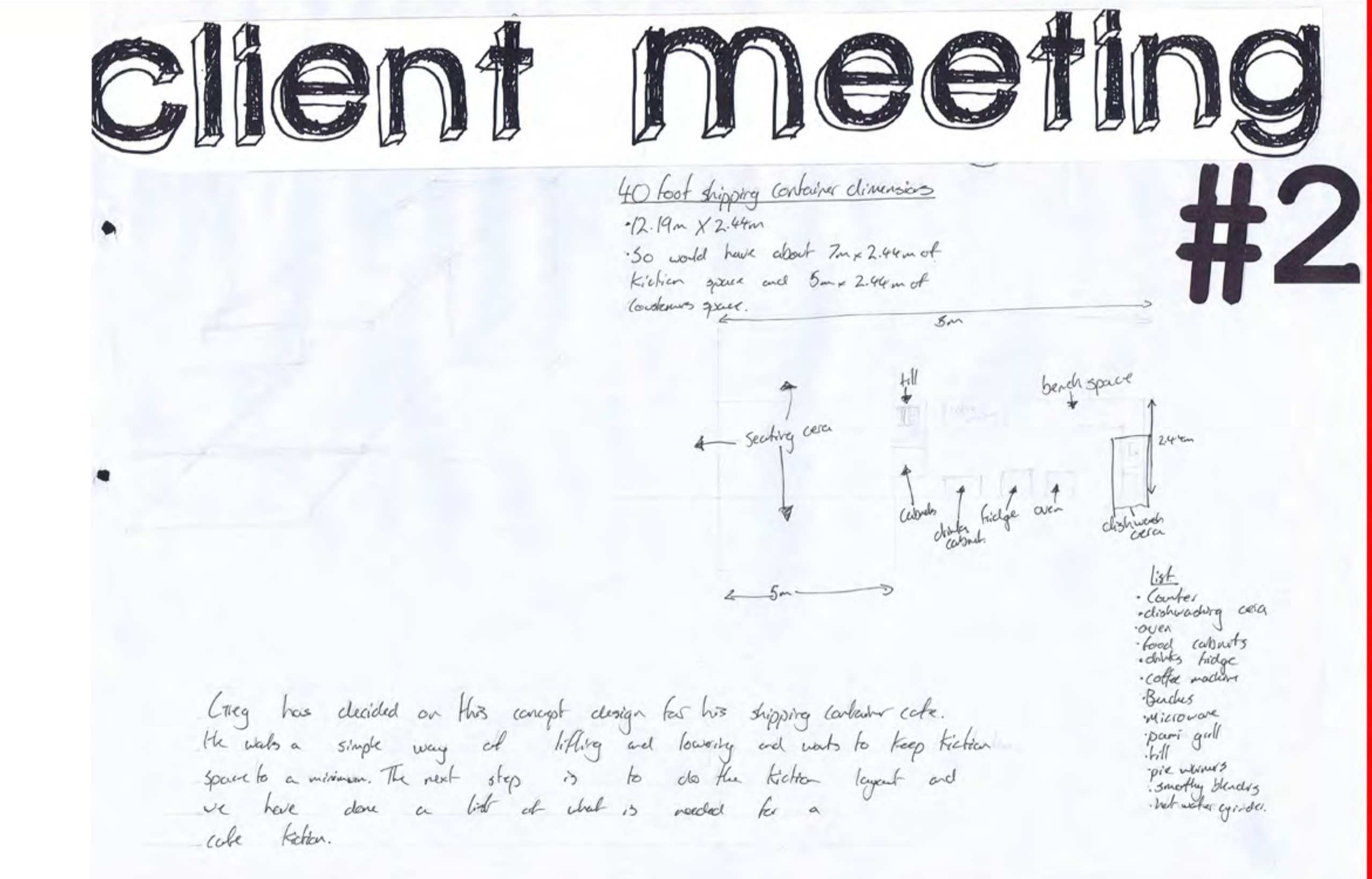
	Grade Boundary: High Achieved
4.	For Achieved, the student needs to resolve a spatial design through graphics practice. This involves: • exploring and refining design ideas based on an analysis of the design context (including opportunities and constraints) and understanding of spatial design knowledge • communicating a spatial design that addresses identified opportunities and constraints. The student has started to explore the human factors and some wider environmental factors to solve issues in the development of the design ideas (1). Opportunities and constraints identified by the student provide further scope for design investigation (1). Some basic human factors are explored, and the use of computer images shows an understanding of the spatial design knowledge expected at this level (2). The evaluation starts to show how the design has addressed the significant opportunities (2). To reach Merit, the student could address significant opportunities and constraints associated with the location, style and type of building.

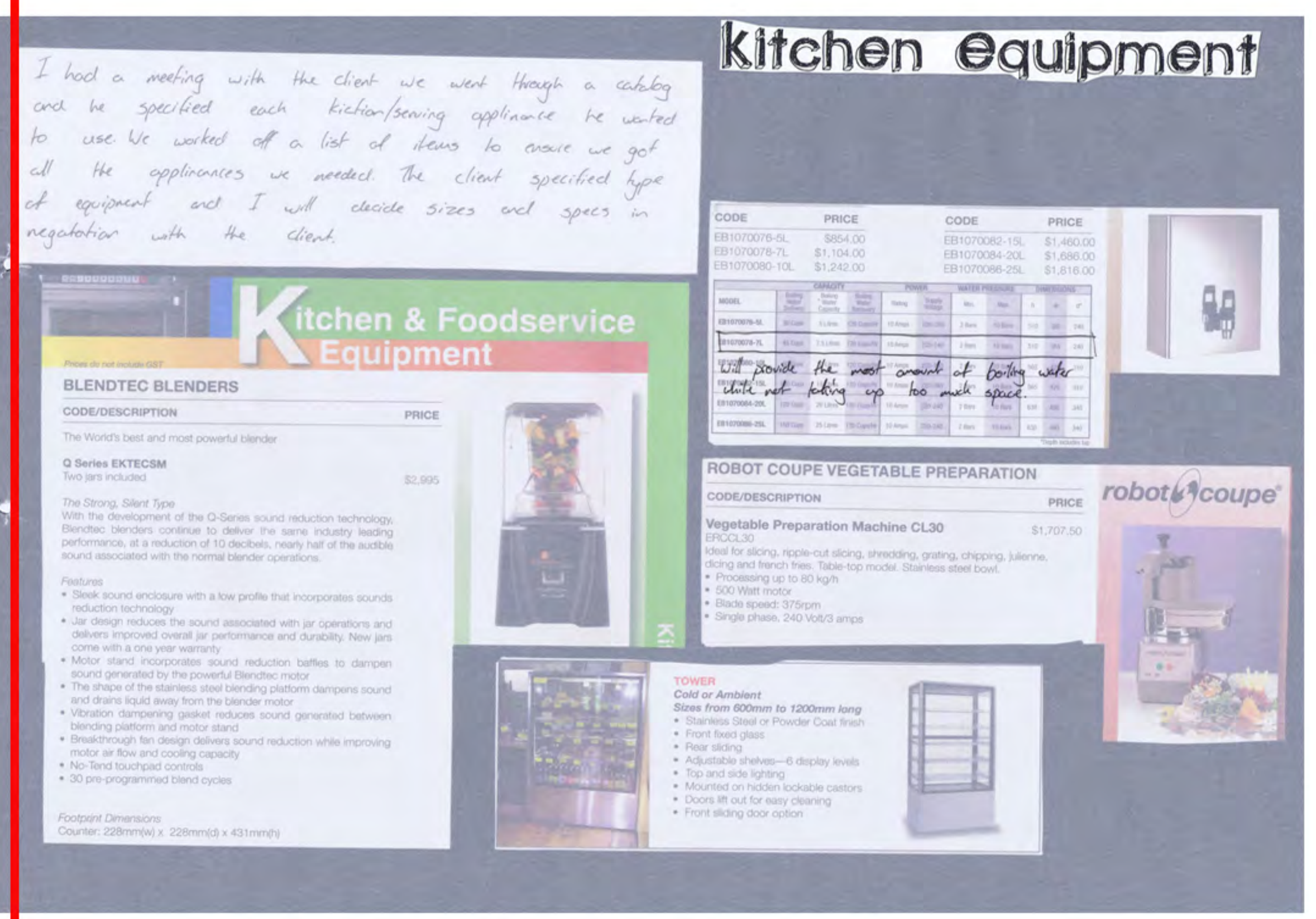
1

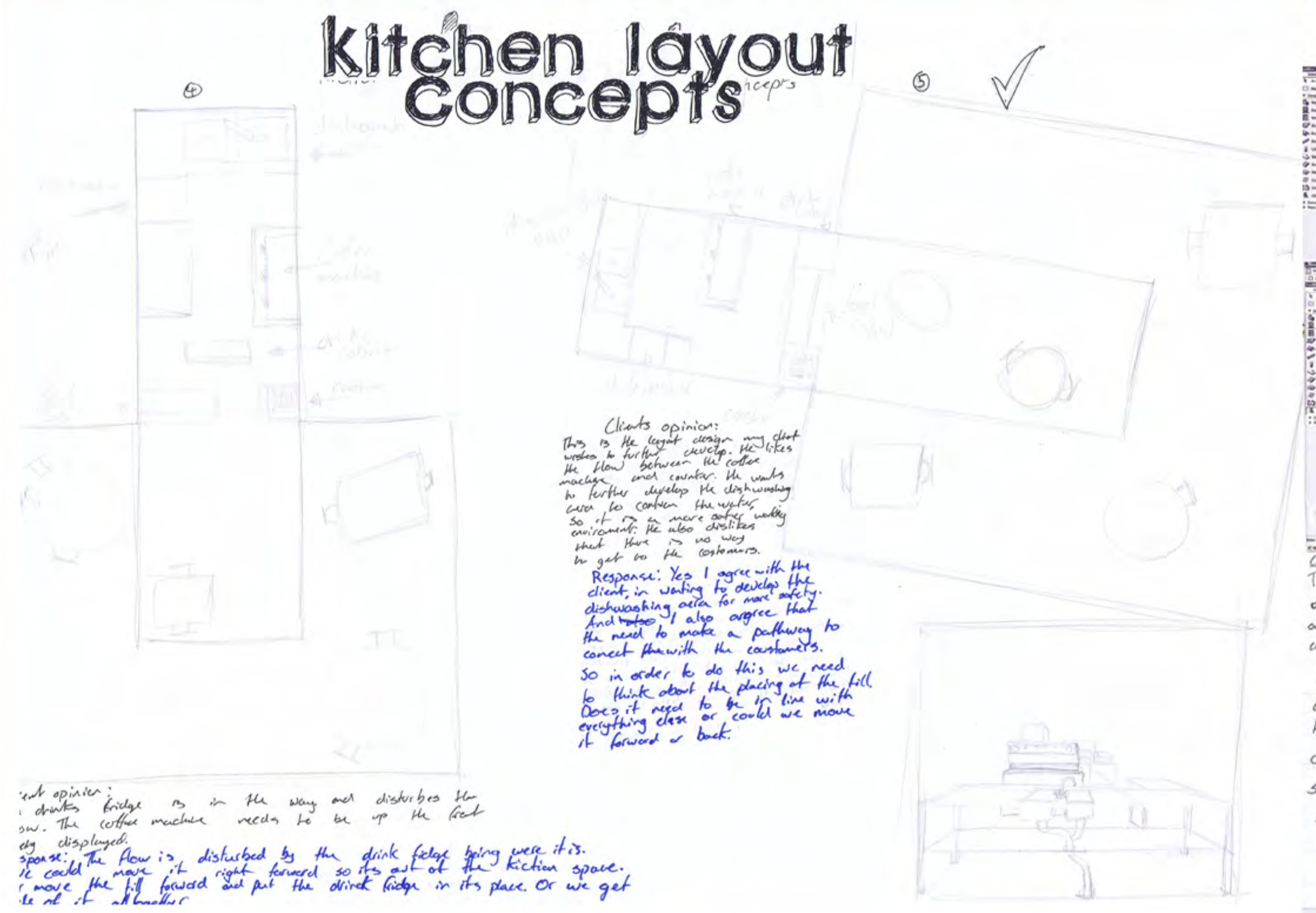


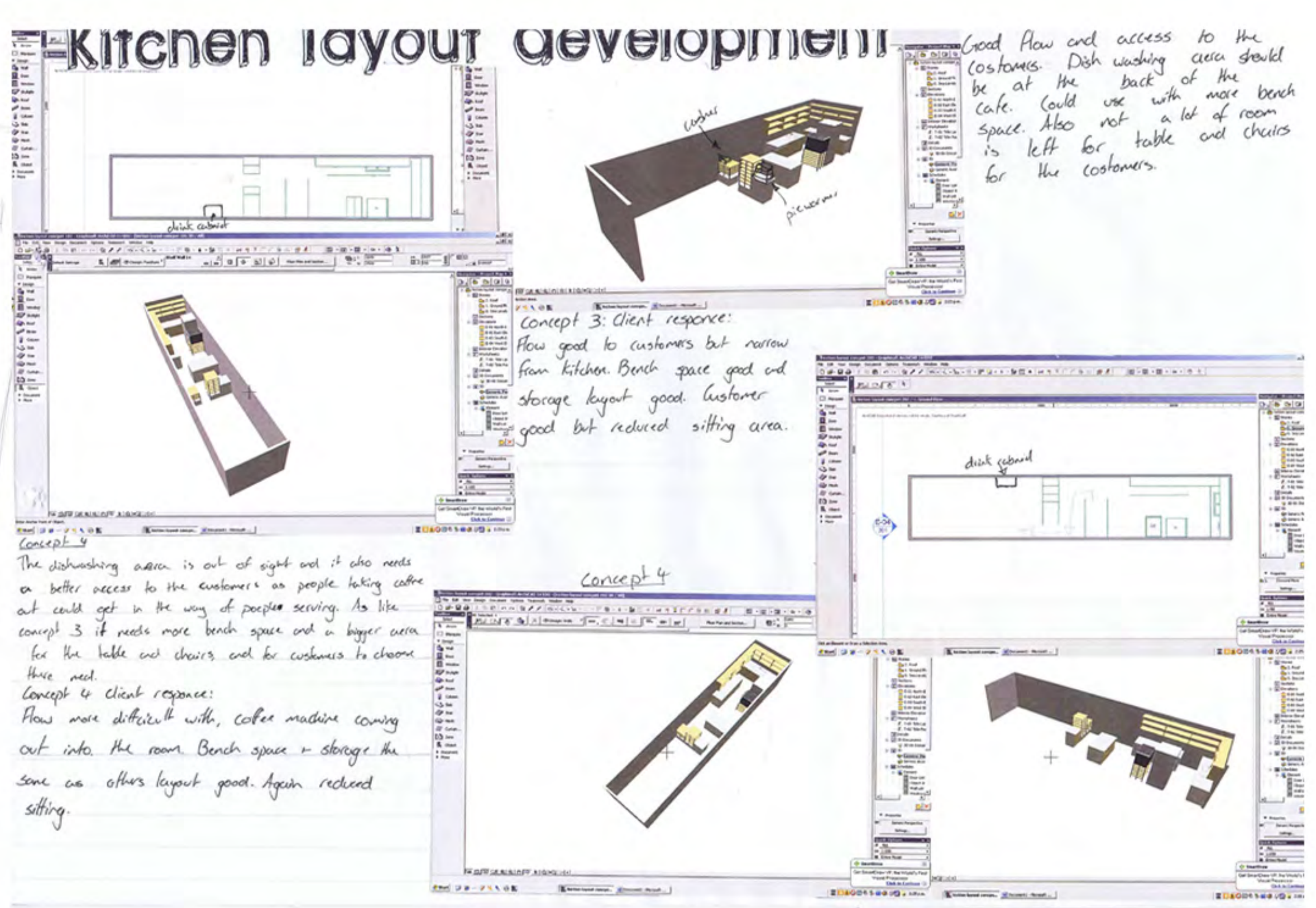


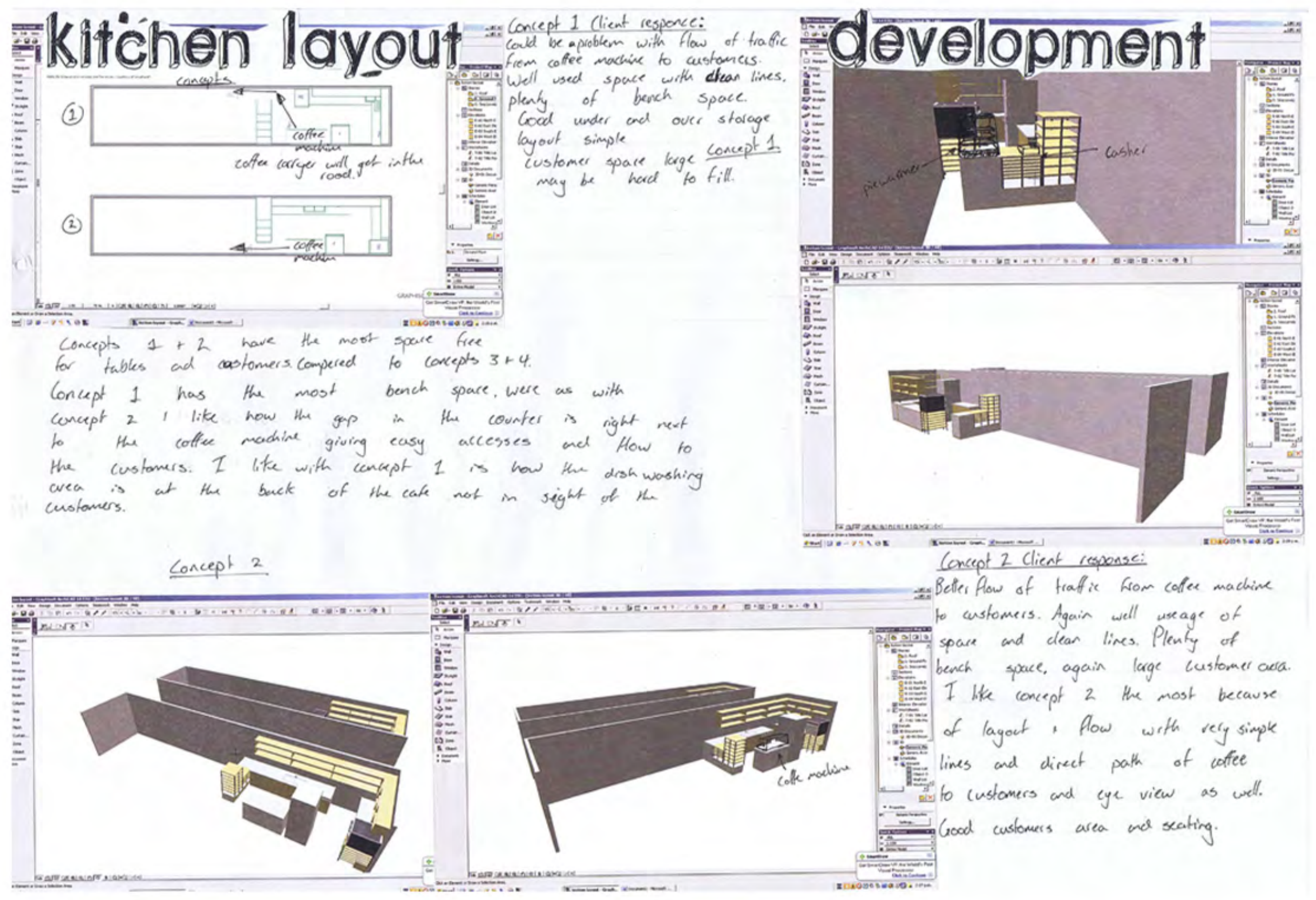


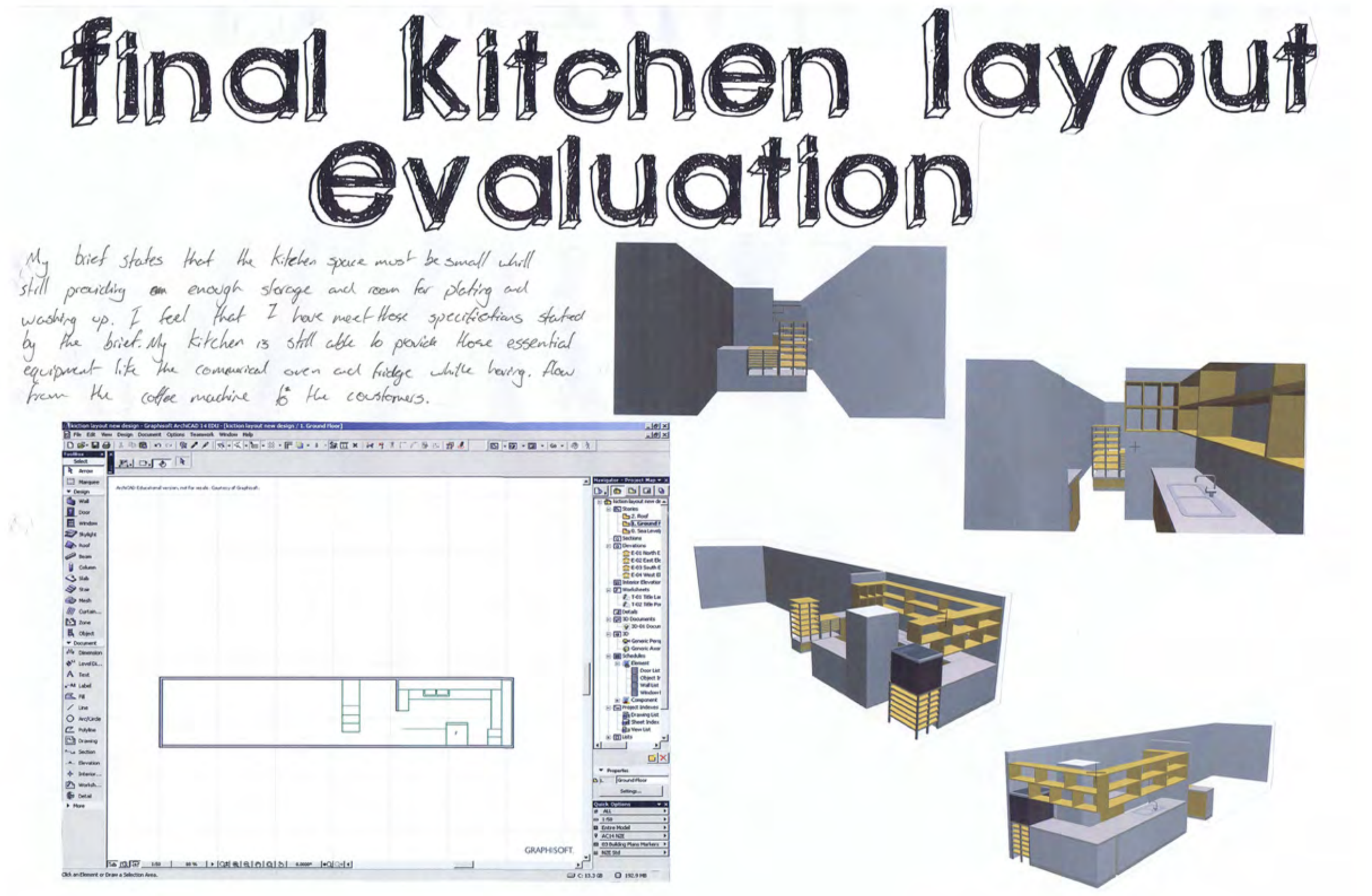


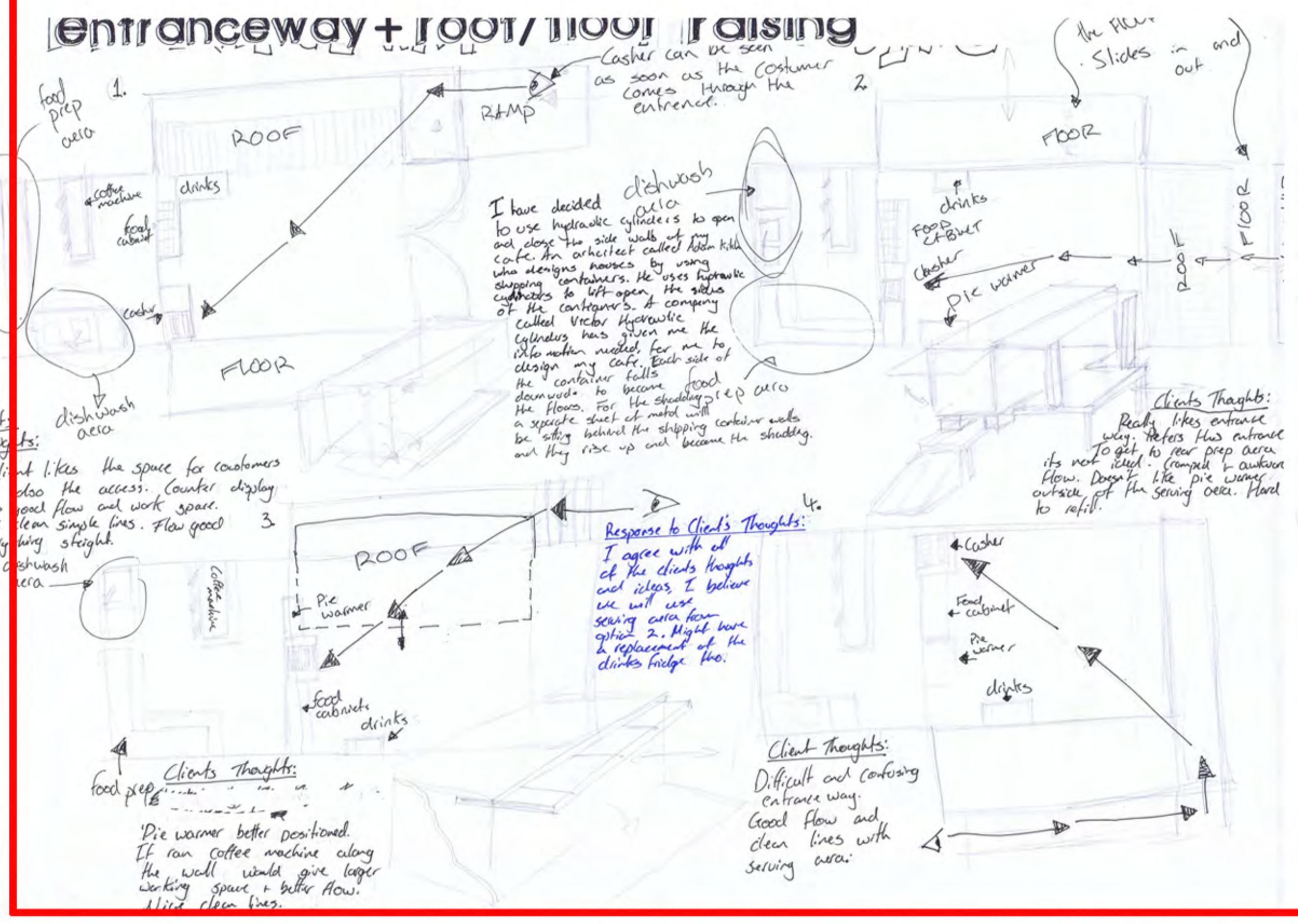


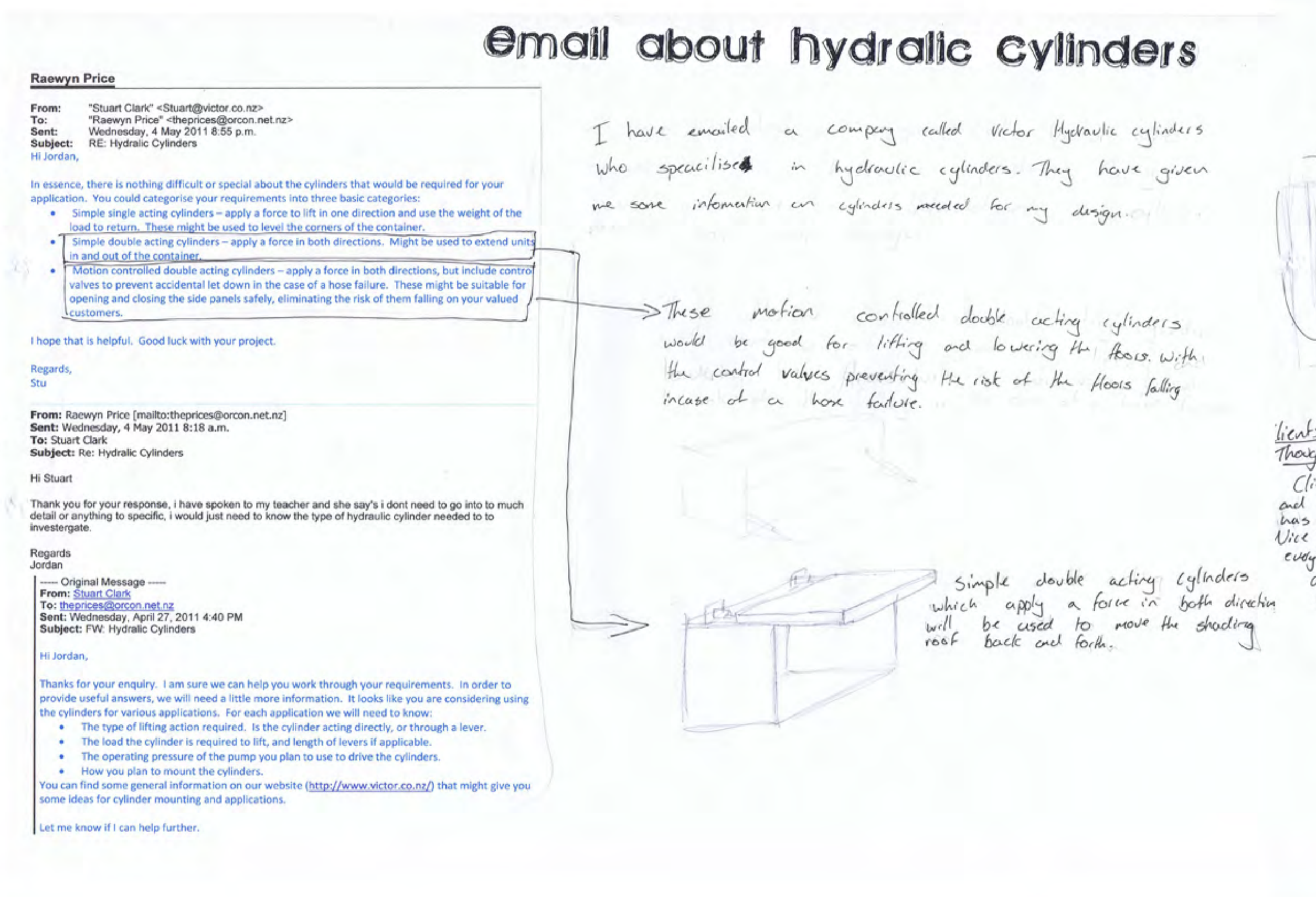


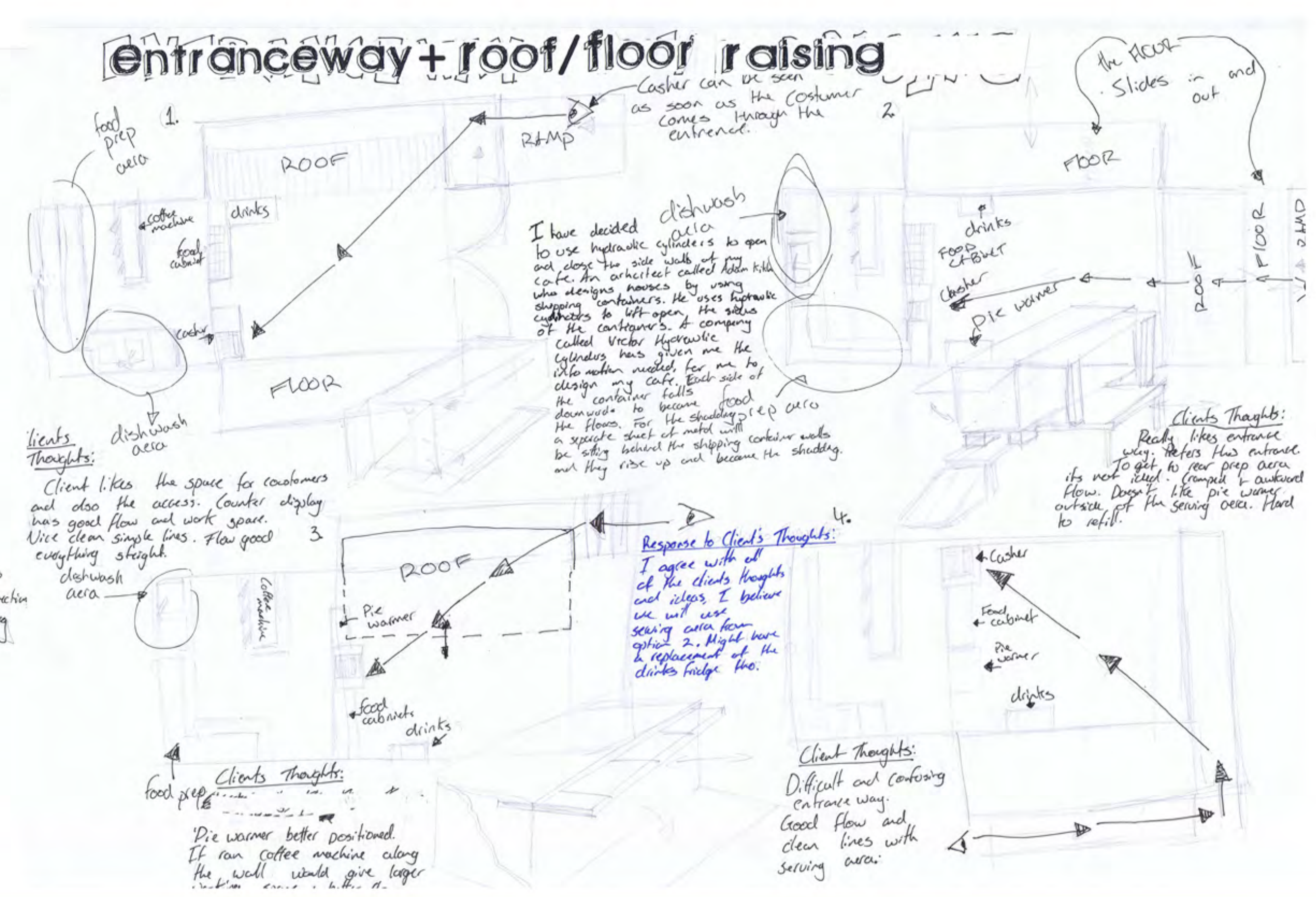












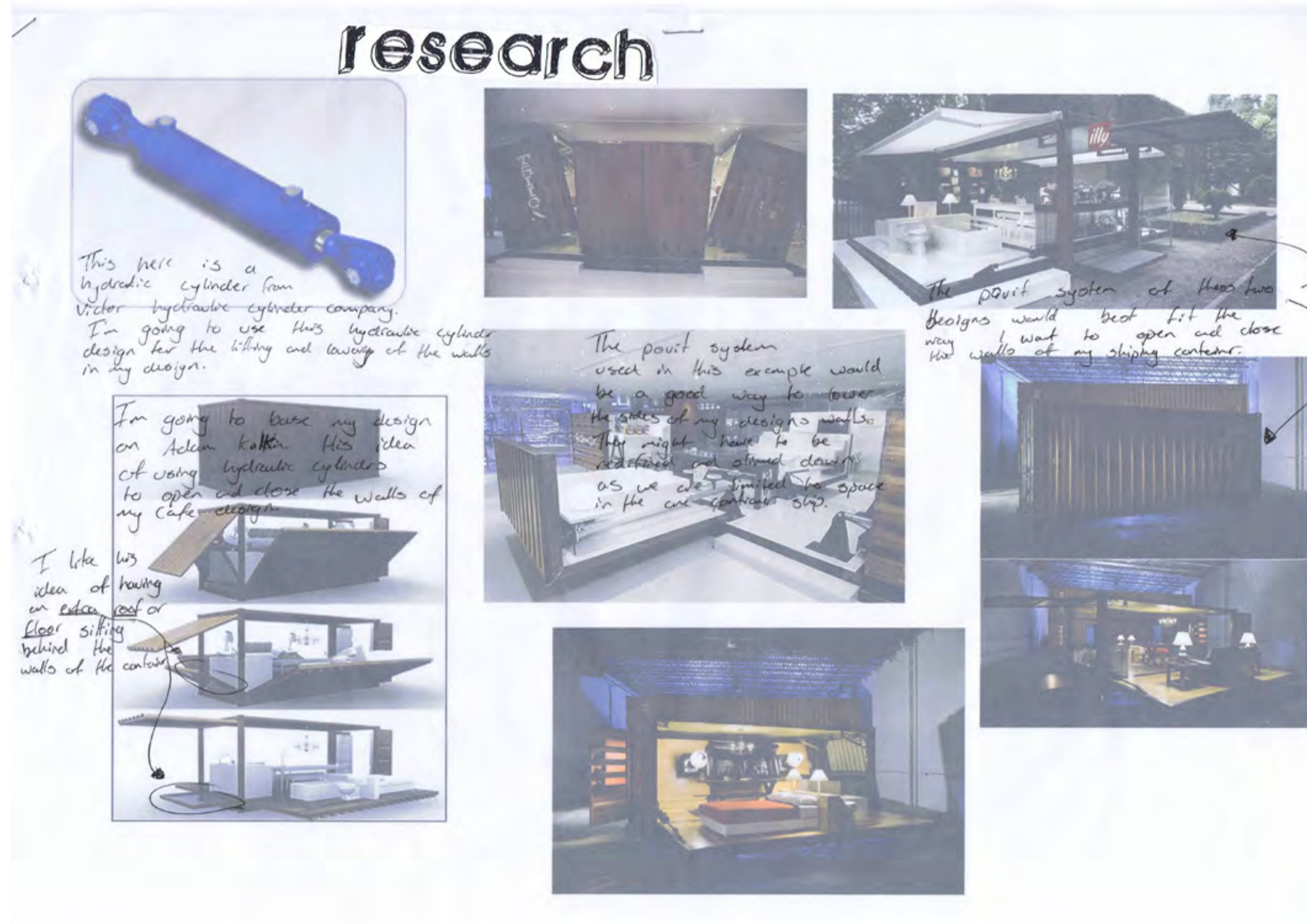


table choices

Werzalit Table Top

Weight 15 kgs 33.07 lbs

Werzalit Table Top available in a variety of colors and patterns.
Standard thickness: 30mm / 1¼ inch

Plain Colors

My Client instead wants to use the table stands with the seprate legs

Client has selected on the black coloured table top

These flat bottom table stands can be quite difficult to deal with, because you have to have a really flat surface for the table to sit on otherwise it will rock and become unstable and uncomfortable.

My client chose the table bases with the seprate legs as the bases with the flat bottoms need to have a perfectly flat surface to sit on. My client chose the Werzalit table top and the colour black because he likes simple designs.

ARPA Table Top

Weight 15 kgs 33.07 lbs

ARPA Laminate table top with ply edge.
Standard thickness: 25mm / 1 inch

Top Finish Options
ARPA & Ply

My Client doesn't like the wood grain finish on the table he likes the simple finished top of the the werzalit table tops

Ply Edge
Staining Options
Natural Maple Walnut Wenge
Cherry Mahogany Black Lacquered

ARPA Laminate Colors
Black ARPA 509 ARPA 20 ARPA 997 ARPA 1281 ARPA 1286
ARPA 1017 ARPA 998 ABET 313 - Wenge ARPA 1090 ARPA 244
ABET 412 ARPA 651 ARPA 634 ABET 385 ARPA 528
Gray ARPA 211 ARPA 531 ABET 386 ABET 861 ARPA 561
ABET 1354 - Zebrano ABET 859 ARPA 1017

Chair Choices

1. •very good style and colour •comfortable •can be stacked •Plastic, durable •can rust
2. comfortable •may take a while to dry if wet •Stackable •If the frame is aluminium will have to be coated so doesn't rust
3. •looks rocky and uncomfortable. •don't know if it is stackable.
4. •Stackable •good style •looks rocky and unstable •If aluminium will have to be treated for rust.
5. •Stackable •Stylish •plastic, •weather durable.
6. •Stackable •will dry quickly if wet •if aluminium will need to be coated for rust.
7. •Stackable •looks rocky and unstable •stylish •aluminium will need to be treated for rust
8. •good style and comfort •Stackable •Looks will take time to dry if wet.
9. •Good style •Stackable •plastic •weather resistant and durable
10. •Stackable •Comfort •stylish •plastic •weather durable.
11. •Stackable •stylish •plastic •weather durable.
- a. •Stackable •Comfort •plastic •weather durable.
- 13. •Stackable •style •looks awkward to sit in
- 14. •aluminium will need to be treated for rust •Stackable.
- 15. •Stackable •nice style •looks sturdy and comfortable •will need to be treated for rust.
- 16. Stackable •comfortable •Holds out weather resistant
- 17.

My Client has decided on chair number 1. As it is fully plastic, you don't have to worry about corrosion, as a lot of areas we will be setting up the cafe will be near a beach. Space is a big thing, so we only have a 40 foot container with about 8 by 2.5 m of customer space so for the chair to be stacked is a big issue. And the chair number one doesn't look it can be stacked, But the client really likes the colour and style. It may be able to be made stackable as you can see in chair 13 their are holes cut out for the back legs of another chair to fit on top. Or chair five, which is stackable unlike his chosen design.

table layout Concepts

Overall Response

Client has some very good ideas about the table layouts. He particularly likes the bar table from concept 1. The round tables will be a bit tuller to use them the square tables. The entrance way from concept 3 is the clients favourite out of all the concepts.

① Clients Thoughts

Big bigger tables at back of serving area. Have smaller tables closer to the serving area.

② Clients Thoughts

Very good flow, simple.

Bar Tables

③ Clients Thoughts

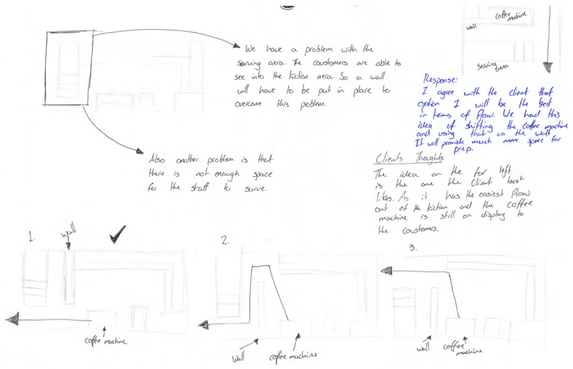
Very good. Difficult to get to back tables. Round tables better to get around. A bit narrow in some areas.

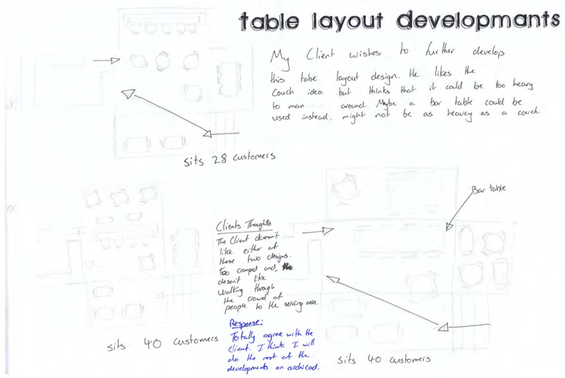
④ Clients Thoughts

Not enough room for passage. Bar table good utilization of space. Use all round tables instead of square. because of space.

Bar table

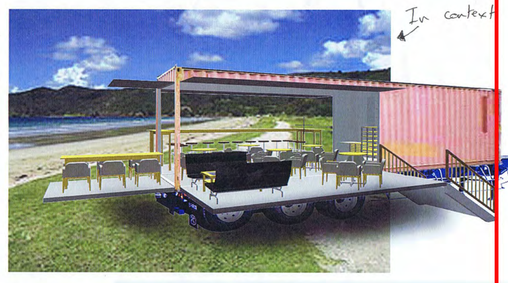
table layout developments



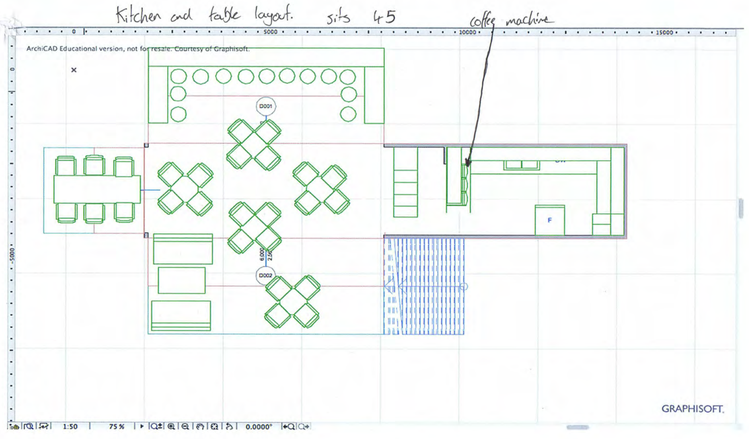


final Evaluation

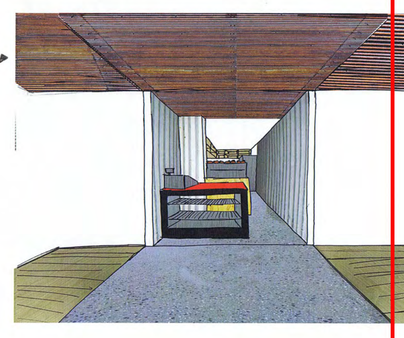
My brief states that my design must be able to fit on a truck or vehicle and be transported on a tersel road. As being a shipping container it will just go on the back of a big rig truck that transports shipping containers. Also thanks to the hydraulic cylinders the sides can fold back up so the container isn't to wide to fit on the road. With the kitchen layout I've changed since the last design, so the coffee machine is more on display and also providing more space. The table layout sits all together 45 people, so enough room for customers in such a small area. I feel I have met all of these specifications met by the brief.



Kitchen and table layout. sits 45



Interior design



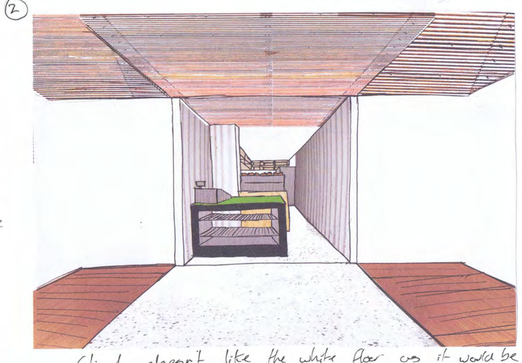
interior design

1. ✓ Client likes this concept the most and wishes to use this for the final design.

I think we should change the colour of the blue counter top to the rest of concept ③.

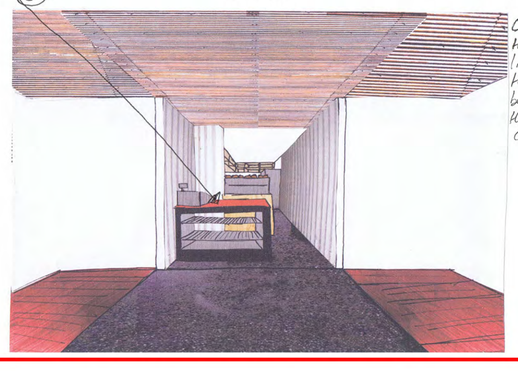
I agree with the client and that we use the design of concept ①, but I think we should still change the colour of the counter top.

2.



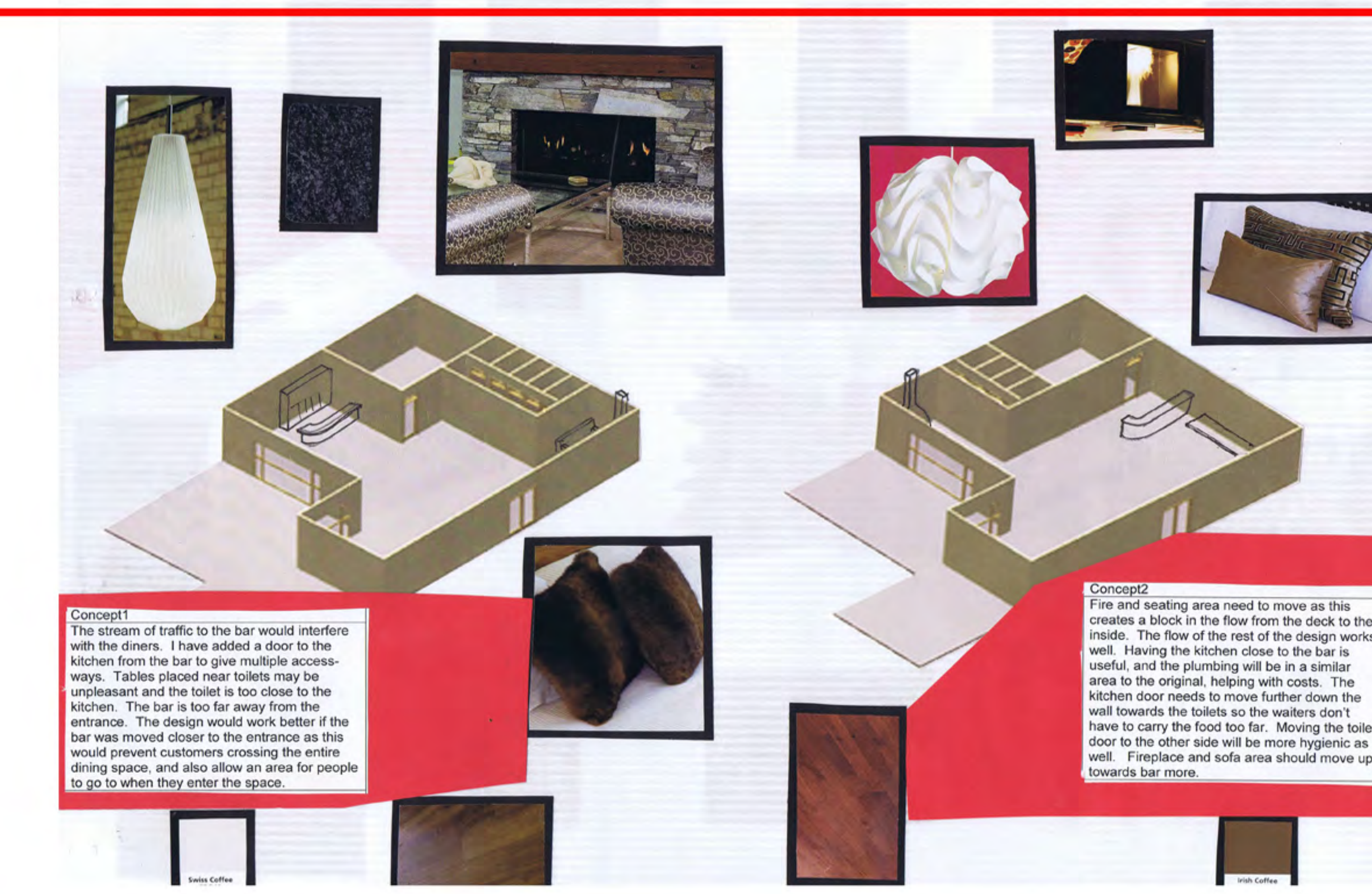
Client doesn't like the white floor as it would be a hassel to keep it clean. As the dirt would come up easily. Like the plywood floor in concept ③ he doesn't like the plywood floor in concept ② + ③ as they look too unnatural.

3.



Client really quite likes the black floor, I aswell like the black floor. But I think the grey floor works best with the rest of the colours of shipping container.

	Grade Boundary: Low Achieved
5.	For Achieved, the student needs to resolve a spatial design through graphics practice. This involves: • exploring and refining design ideas based on an analysis of the design context (including opportunities and constraints) and understanding of spatial design knowledge • communicating a spatial design that addresses identified opportunities and constraints. The student has begun to identify the opportunities and constraints available in the design brief (1). The opportunities identified provide further direction for design exploration and refinement. Some of the research is integrated in design ideas and the computer generated images show understanding of spatial design knowledge such as space and flow in the kitchen area (1). For a more secure Achieved, the student could integrate the research into the design ideas more, to show how that research has informed the design ideas and also show more depth in the exploration and refinement of the design ideas.



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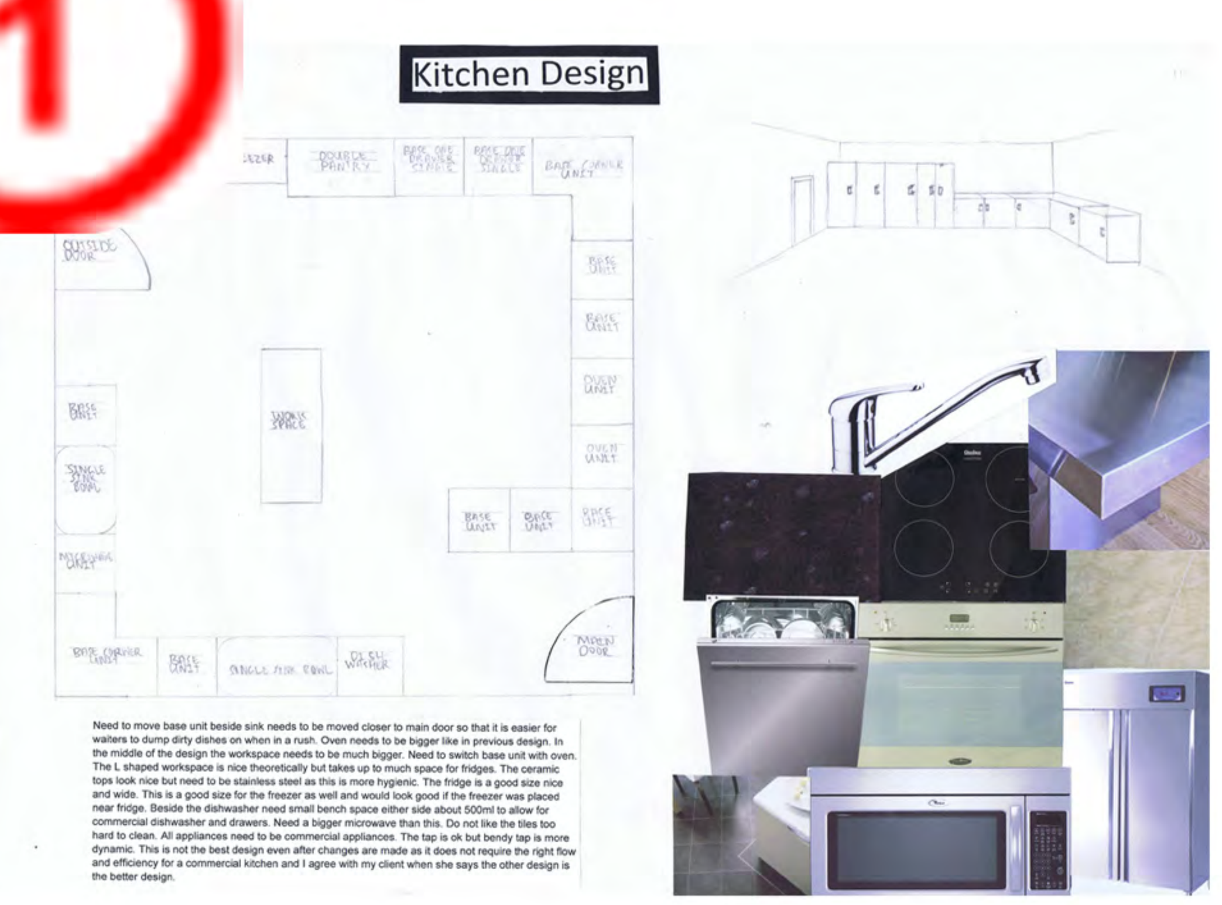
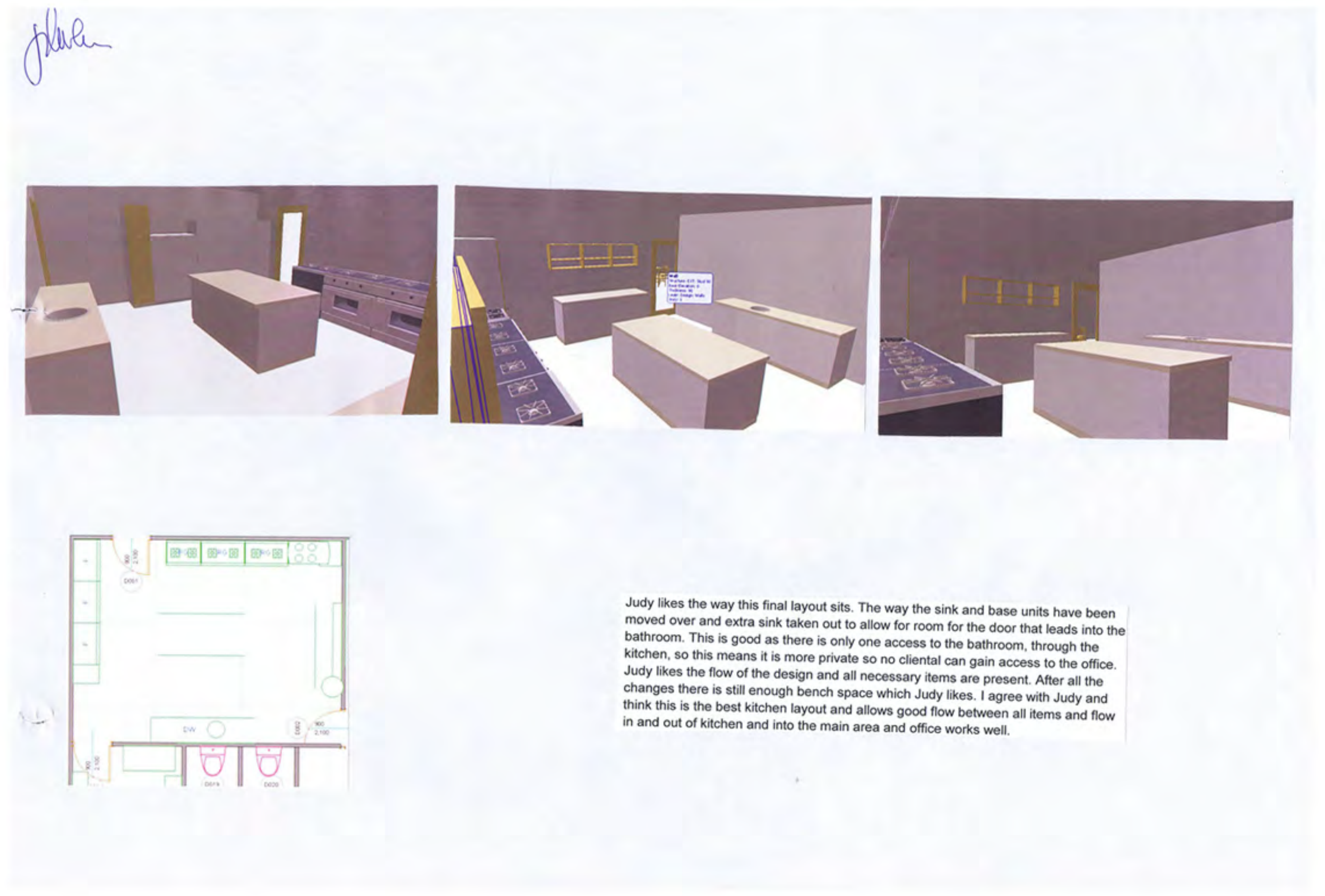
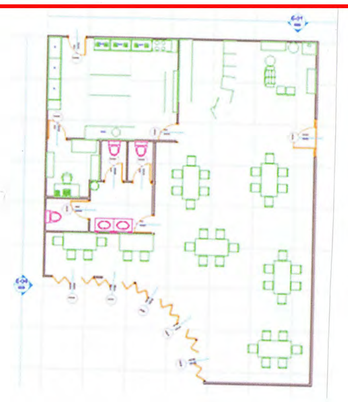
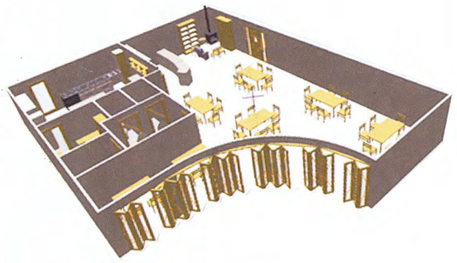
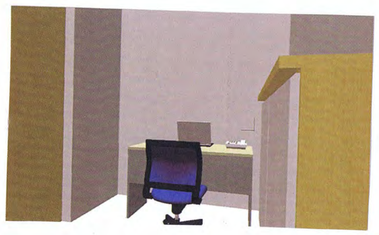
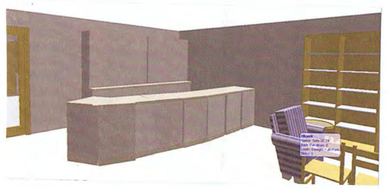


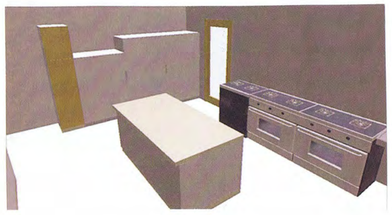










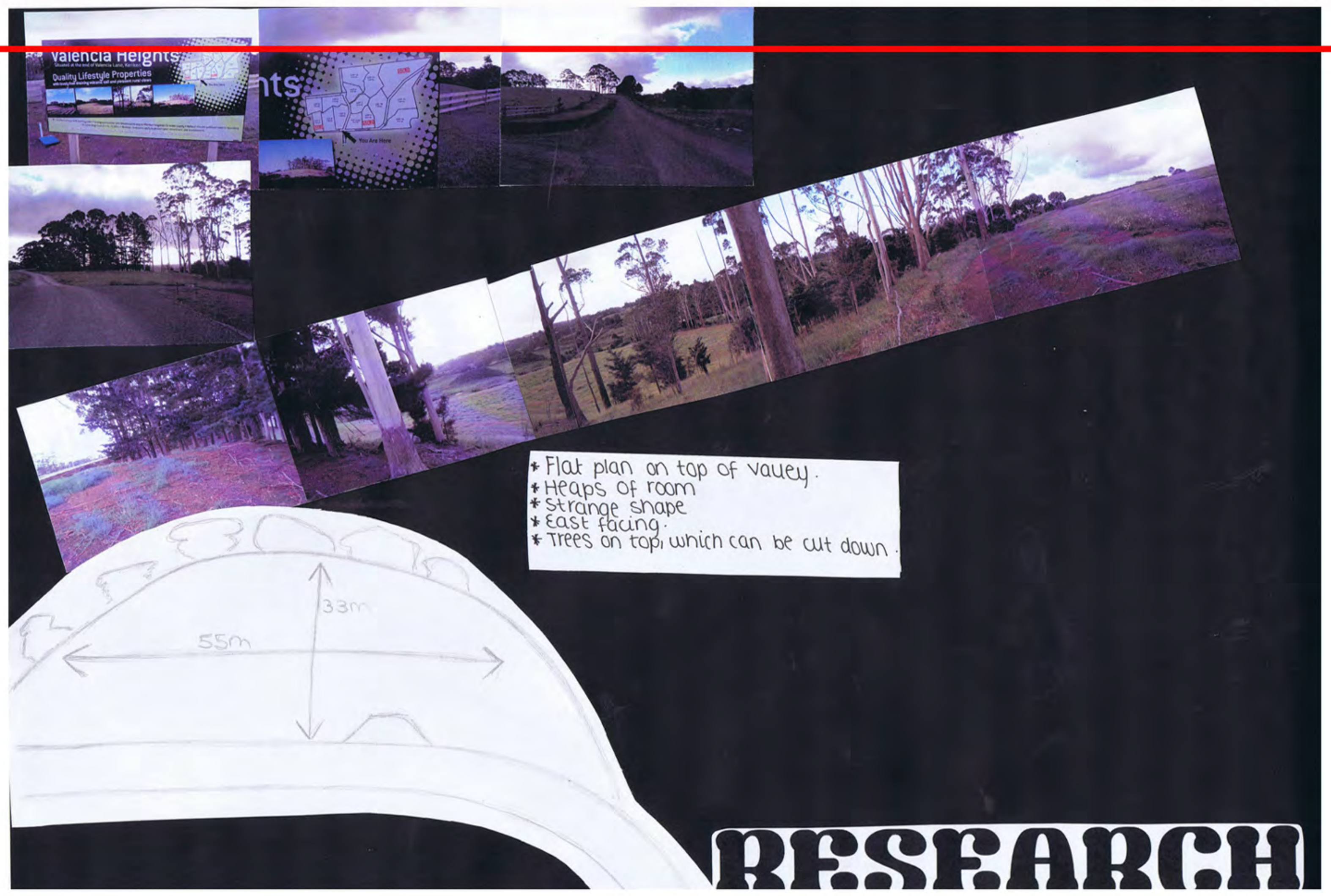


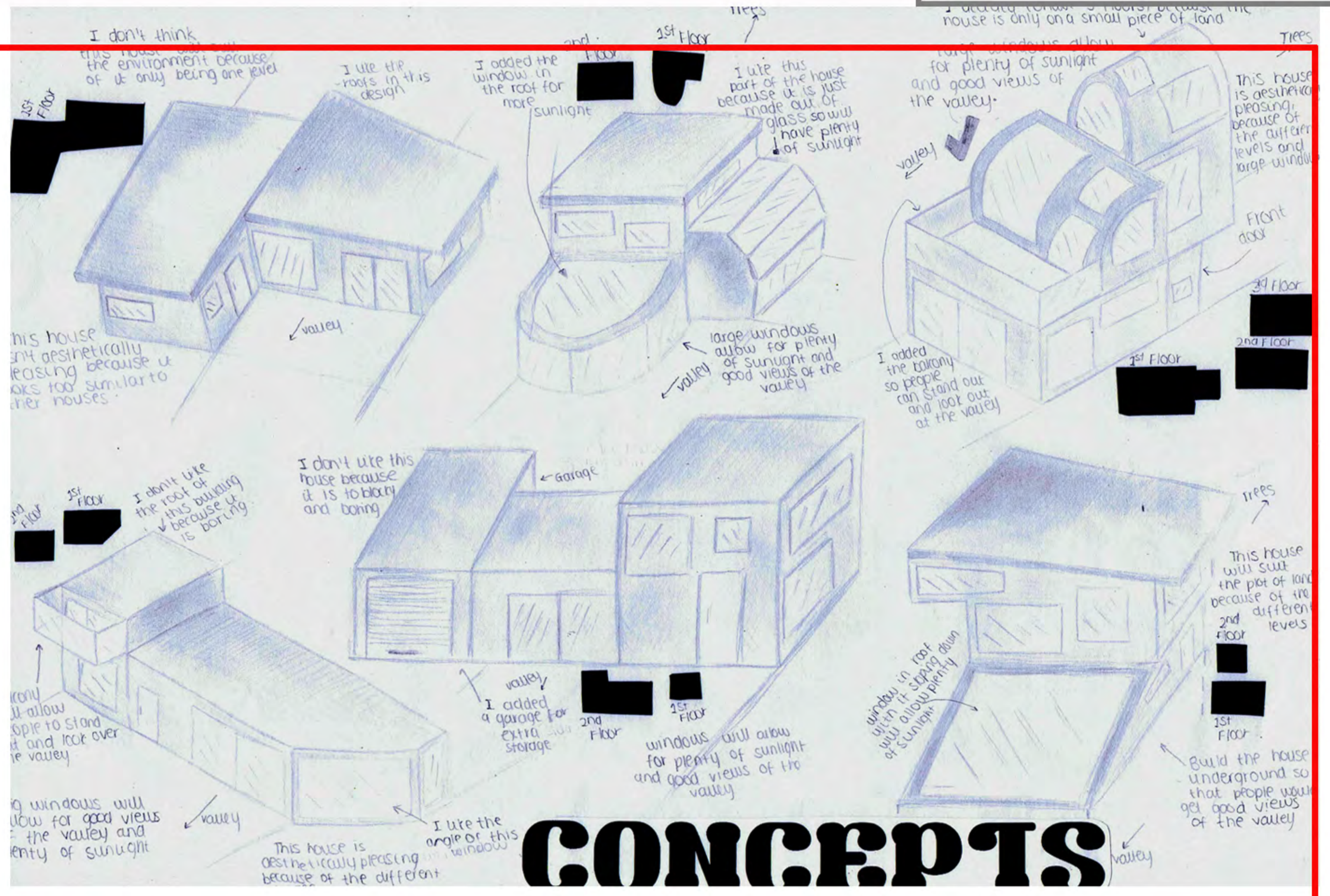
2

The design brief states that my design has to fit closely to the current shell of Ake Ake Winery Restaurant. My new design does meet this specification as the design fits into the original shell of Ake Ake but I have however created a curved wall to create interest and to open up the flow from inside to the outside seating areas. The specifications state I need to include a bar area, kitchen, toilets, indoor and out door seating and possible casual seating area. I have included in my design a bar area and have looked into the possible shapes and colours for this area and have with Judy's help decided on the best design. I have looked at many different layouts for the kitchen design and included the best design within my final. I have included a bathroom in my design with 2 sinks 2 toilets and a disabled toilet. I have created a design that allows enough space for indoor and outdoor seating and good flow between the two. I have looked at possible tables and chairs for this area and decided on the best fit for the style of Ake Ake. I have also included a seating area within my design including chairs couches fire place and coffee tables. I have worked closely with Judy with frequent and thorough meetings to insure that my design links with her ideas and the overall colour scheme that she desires for Ake Ake.

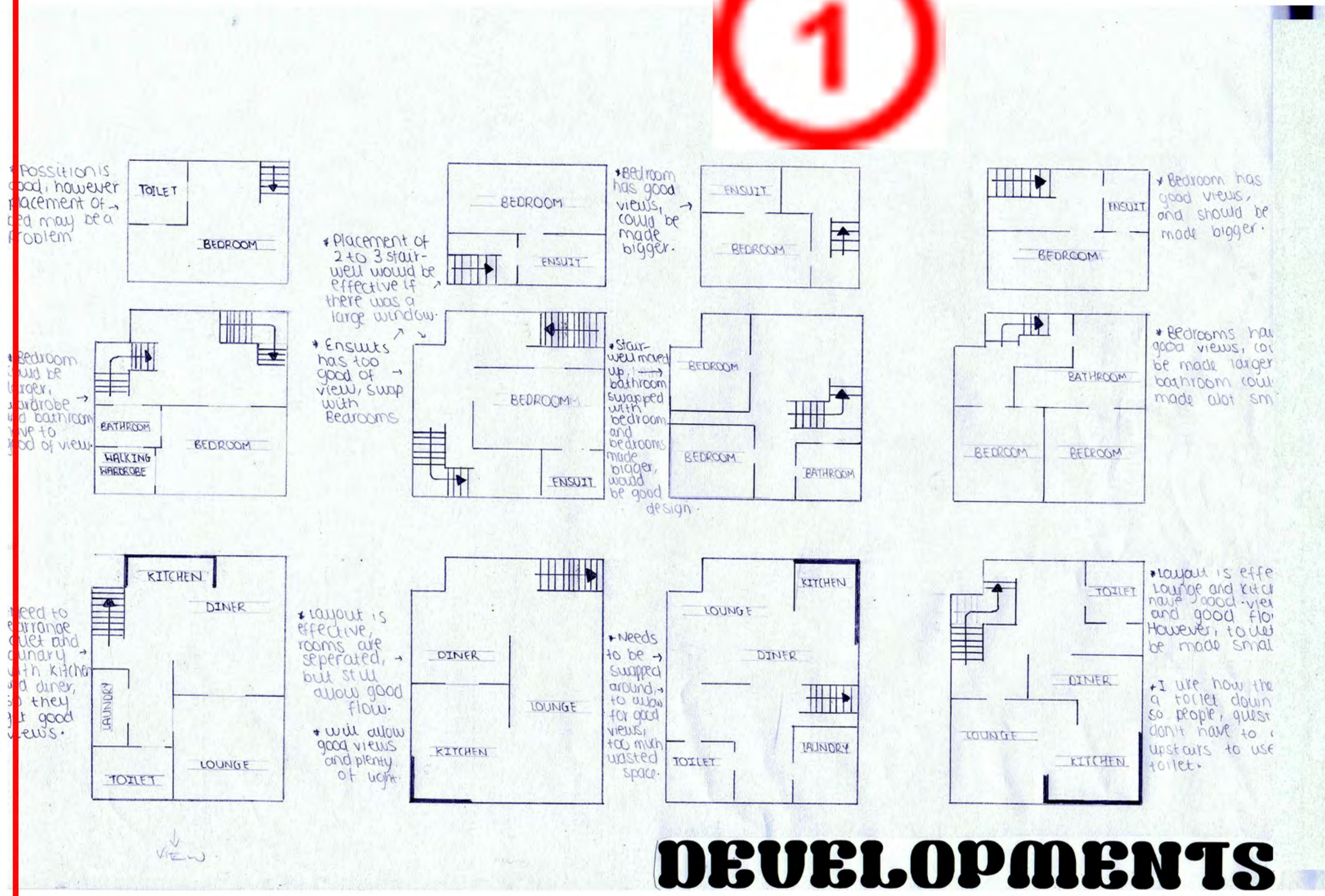
	Grade Boundary: High Not Achieved
6.	For Achieved, the student needs to resolve a spatial design through graphics practice. This involves: • exploring and refining design ideas based on an analysis of the design context (including opportunities and constraints) and understanding of spatial design knowledge • communicating a spatial design that addresses identified opportunities and constraints. The student has started to show an understanding of spatial design knowledge with the use of mock-ups and computer generated images (1). There is some analysis of the design context,w and the opportunities and constraints start to appear in the annotation (1). This analysis occurs throughout the design process as the student investigates the design issues involved. The final solution shows good use of computer aided drawing for the floor plan, elevations and 3D views of the structure that show some spatial design knowledge has been used (2). To reach Achieved, the student could increase the depth of understanding and reference to spatial design knowledge in the exploration and refinement of the design ideas.

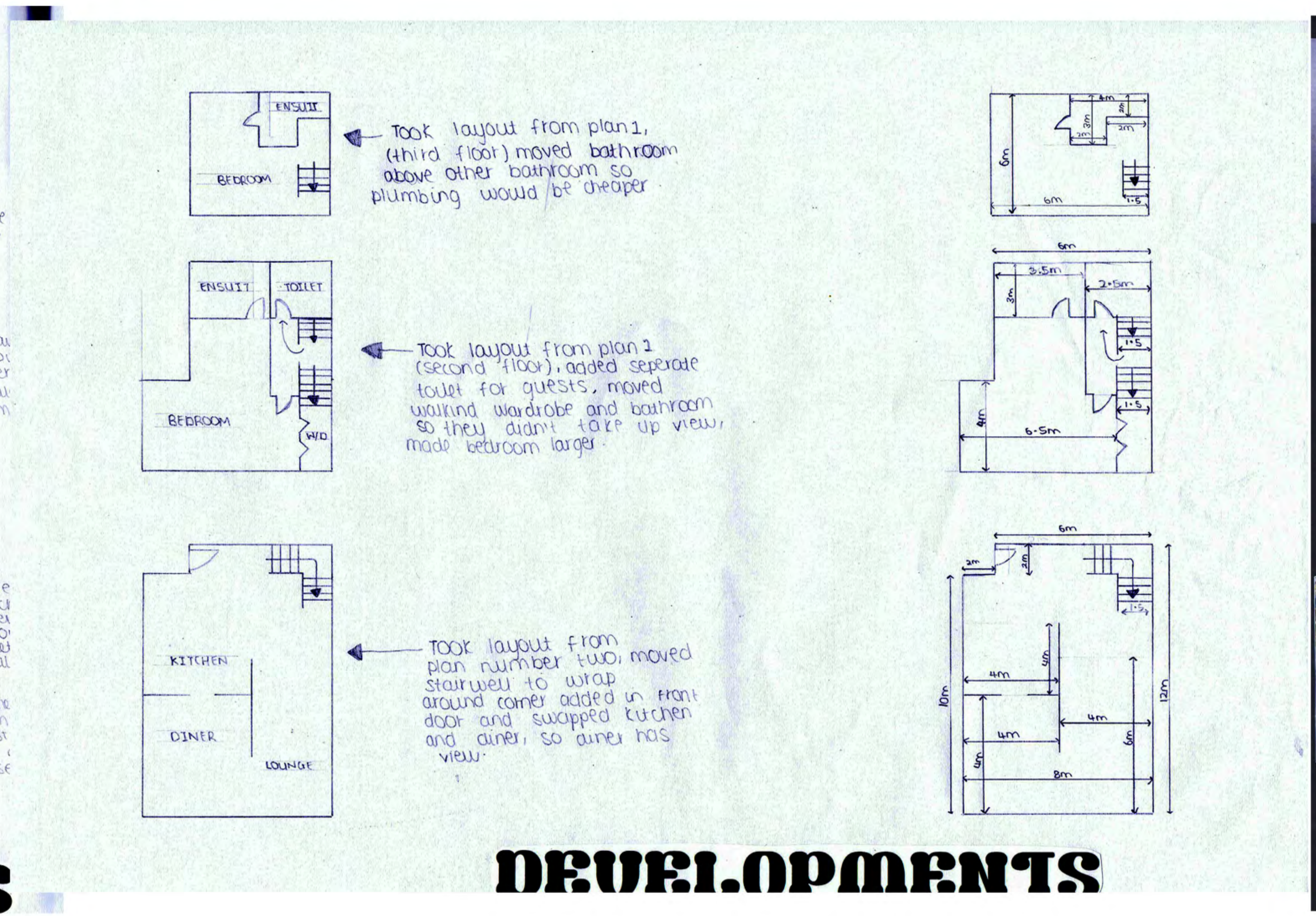

RESEARCH

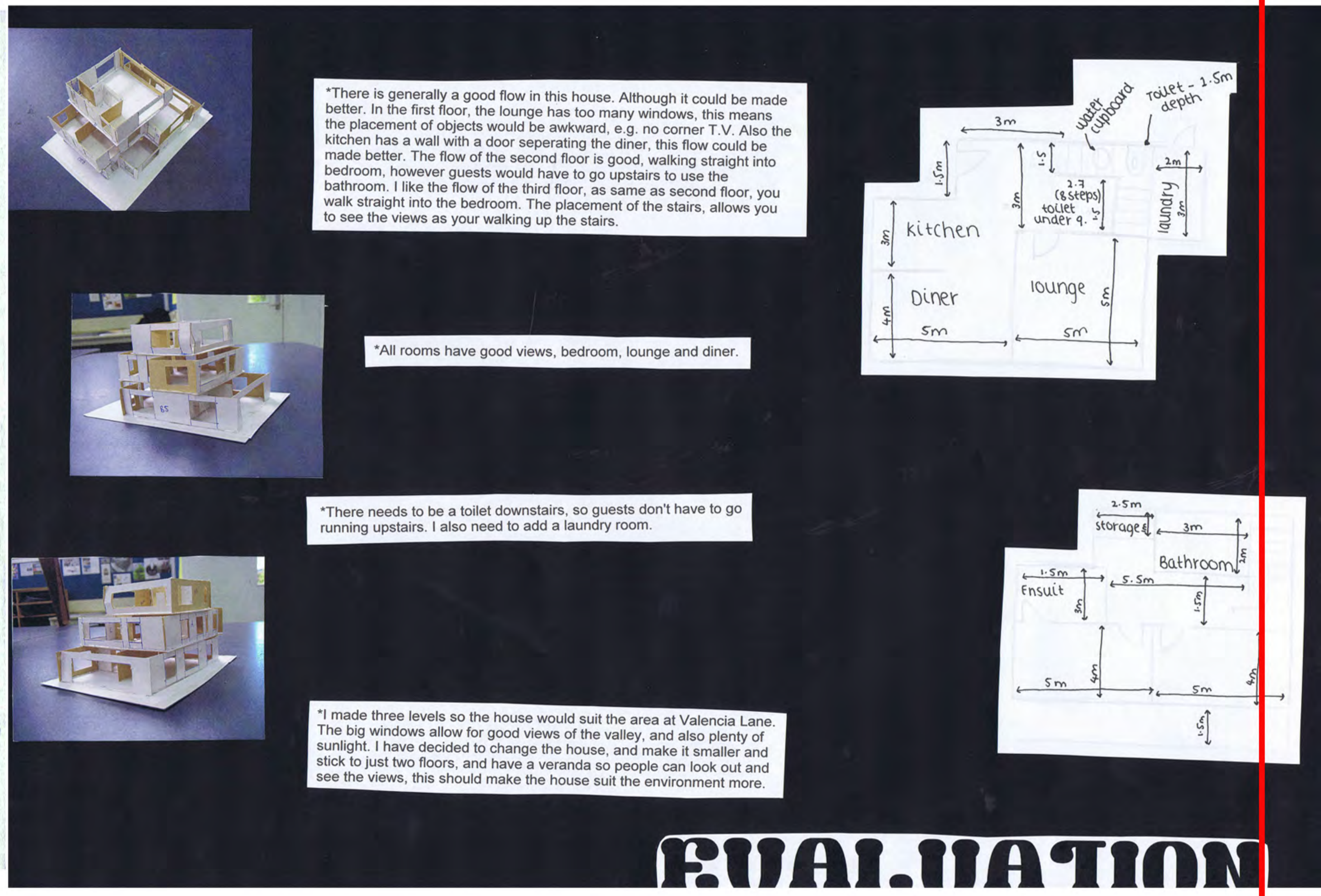

Valencia Heights
Flat plan on top of valley
Heaps of room
Strange shape
East facing
Trees on top which can be cut down
55m
33m
RESEARCH

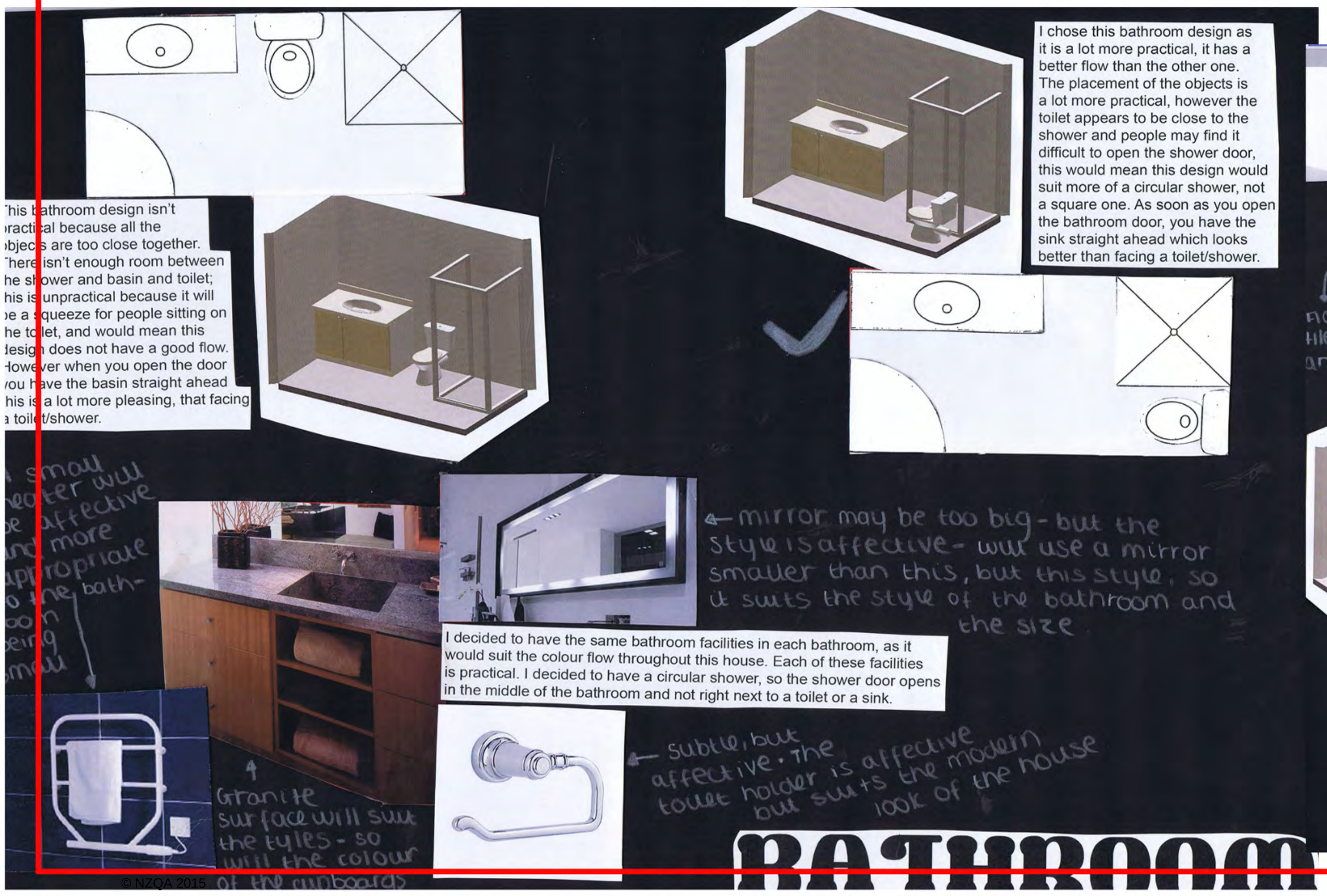

CONCEPTS

1


DEVELOPMENTS


DEVELOPMENTS


*There is generally a good flow in this house. Although it could be made better. In the first floor, the lounge has too many windows, this means the placement of objects would be awkward, e.g. no corner T.V. Also the kitchen has a wall with a door seperating the diner, this flow could be made better. The flow of the second floor is good, walking straight into bedroom, however guests would have to go upstairs to use the bathroom. I like the flow of the third floor, as same as second floor, you walk straight into the bedroom. The placement of the stairs, allows you to see the views as your walking up the stairs.
*All rooms have good views, bedroom, lounge and diner.
*There needs to be a toilet downstairs, so guests don't have to go running upstairs. I also need to add a laundry room.
*I made three levels so the house would suit the area at Valencia Lane. The big windows allow for good views of the valley, and also plenty of sunlight. I have decided to change the house, and make it smaller and stick to just two floors, and have a veranda so people can look out and see the views, this should make the house suit the environment more.
Kitchen
Diner
lounge
Laundry
Ensuit
Bathroom
Storage
EVALUATION


This bathroom design isn't practical because all the objects are too close together. There isn't enough room between the shower and basin and toilet; this is unpractical because it will be a squeeze for people sitting on the toilet, and would mean this design does not have a good flow. However when you open the door you have the basin straight ahead this is a lot more pleasing, that facing a toilet/shower.
I chose this bathroom design as it is a lot more practical, it has a better flow than the other one. The placement of the objects is a lot more practical, however the toilet appears to be close to the shower and people may find it difficult to open the shower door, this would mean this design would suit more of a circular shower, not a square one. As soon as you open the bathroom door, you have the sink straight ahead which looks better than facing a toilet/shower.
mirror may be too big - but the style is affective - will use a mirror smaller than this, but this style, so it suits the style of the bathroom and the size
I decided to have the same bathroom facilities in each bathroom, as it would suit the colour flow throughout this house. Each of these facilities is practical. I decided to have a circular shower, so the shower door opens in the middle of the bathroom and not right next to a toilet or a sink.
subtle, but affective. The towel holder is affective but suits the modern look of the house
BATHROOM


I chose porcelain floor tiles which contrast well with the cream wall tiles I have also chosen. I matched the sink with the floor tiles by choosing a similar colour so it would match the flow. I also decided to have a long thin mirror, which will be the same length as the sink, in both designs, this is because my bathroom designs are only small and I didn't want to cluster them with a huge mirror.
shower head looks modern and powerful.
circular shower will suit both bathroom designs as not too bulky and both bathroom designs are small.
Toilet will suit the modern look of the house and will suit the bathroom design as it is small
This bathroom design isn't practical because all the objects are too close together. The basin is too close to the door and the toilet, the bath is straight in front of the toilet and basin, and as soon as you open the door you walk into the shower, which isn't practical. This means this bathroom design does not have a good flow, and people will not be able to "easily" walk passed all the bathroom facilities
I chose this bathroom design as it is a lot more practical, the toilet is positioned next to the shower in the corner, and there is a lot more space in between the sink and the shower. However this bathroom design will need to have a circular shower because if the shower was squared shape, it will mean that people may walk into the sink or the toilet, while if it was circular you would walk into the middle of the shower. When you open the bathroom door, you walk straight into the sink, which is slot more effective than walking into the toilet/sink.
BATHROOM


BATHROOM