

# Construction Studies

## Project Portfolio

### Conservatory

2015



Examination Number:

118129

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*John Weeks  
4-6-15*

# Chapter One

## Introduction

### *What Project I decided to do:*

The project that I have planned to do is an addition of a conservatory onto an existing dwelling. By taking advantage of where the sun is most of the day I positioned the conservatory in the most suitable location. The house is a standard bungalow house which is eligible for a loft conversion.

The house is located in a rural setting and it also offers beautiful panoramic views of the surrounding countryside. The side of the house in which the conservatory will be positioned is south facing which is perfectly ideal for a conservatory.

The scale model of house will be to a scale of 1/12 of the real house. The model is just a proportion of the house and will be mainly focussed on the conservatory joining the gable of the main house.

### *Why I Chose this Project:*

I chose this project because my neighbour often talked about building a conservatory onto the side of his house, One day he kindly lent me the plans of the house and I then decided to make a model of the conservatory to get a better understanding of how the house would look if a conservatory was to be added to the existing dwelling. A conservatory on the side of this house would be a nice feature to the building and I felt that because of the houses location and perfect south facing side, that it would be an ideal area to build a conservatory. The area in which I would like to build the conservatory also has a great panoramic view of Dundalk bay.



### *The Background of the Building:*

On Tuesday 16<sup>th</sup> July 1991 outline planning permission was granted to [REDACTED] for the building of their new house.

They then got plans drawn out and eventually bought the site from my father on the 16<sup>th</sup> August the same year. Full planning permission was eventually granted on 11<sup>th</sup> September 1991. They began to clear the site in March 1992. It was then marked out and foundations were poured in the same month.



The building of the house then began in May and the roof was then started on in June. The windows and doors on the house were fitted in the month of July. A temporary ESB connection was made in September and they moved into the new house on 12<sup>th</sup> November 1992. A permanent connection for the electricity was made in June 1993 and in the same year the outside footpaths were put in.





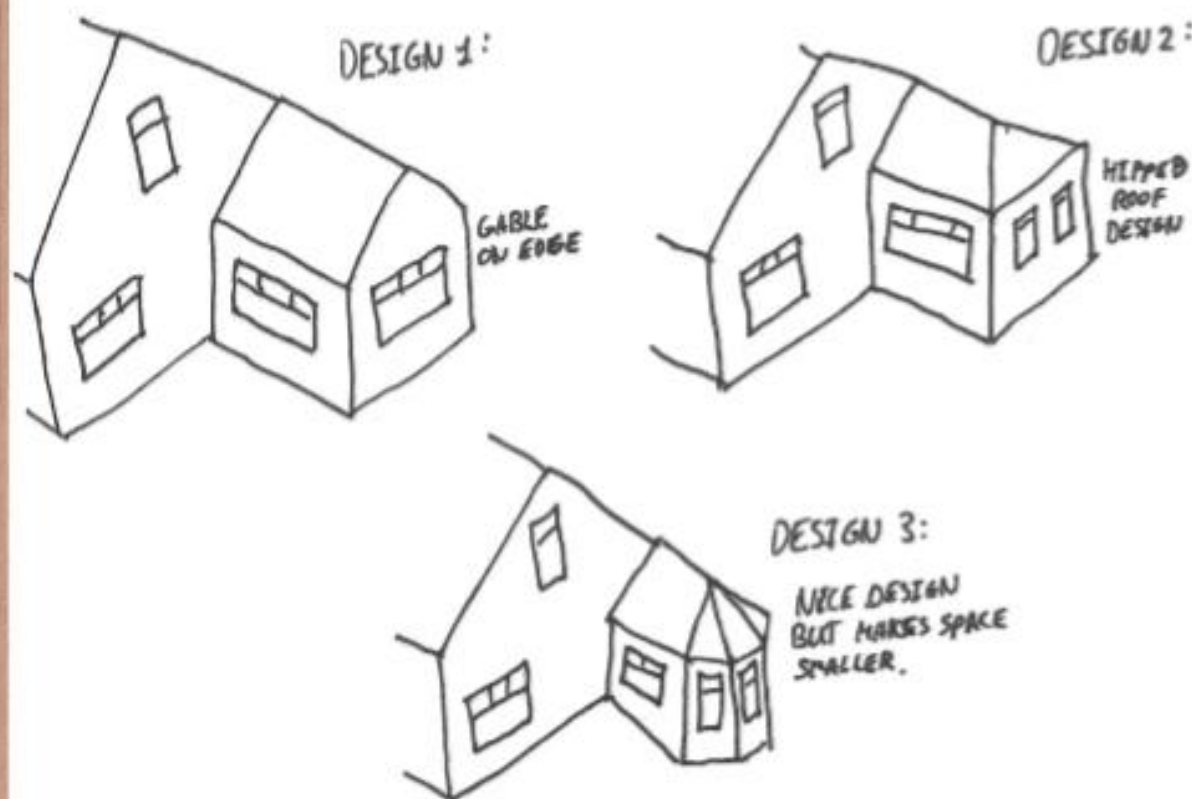
## Chapter Two

### Planning

In order to start the project I had to plan out what I was going to use and how I was going to undertake the project. I had a lot of planning to do before undertaking the task of building the model project. I started the planning of this project in April of the previous year, and I have worked forward from then using these plans. Here is an outline of what I planned and how I planned to go about things:

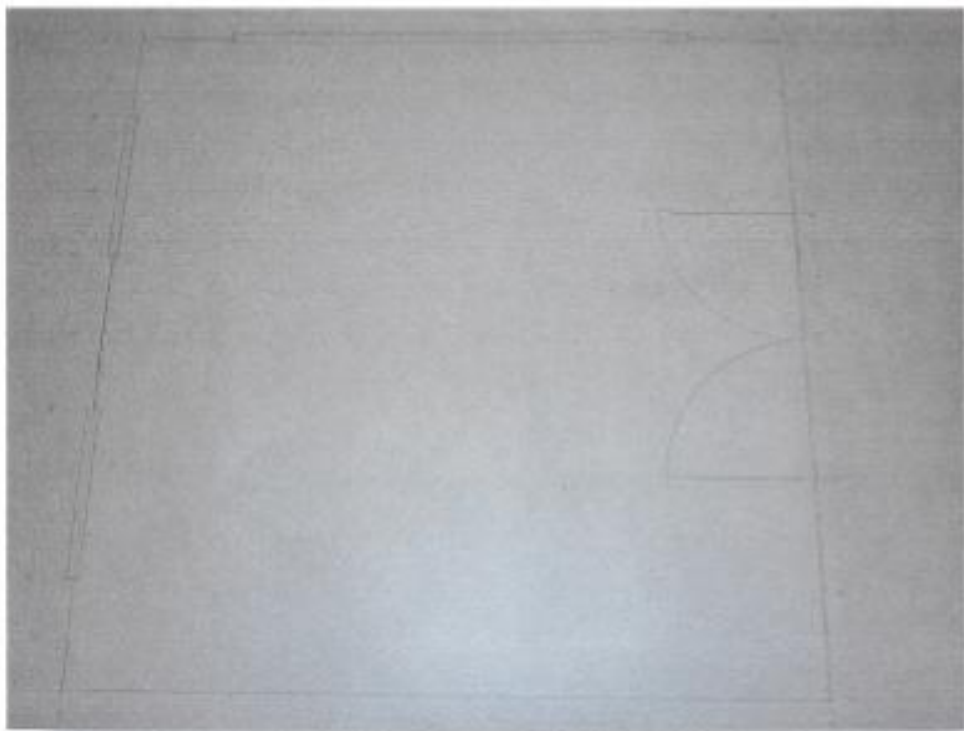
#### Choosing a Design

The first piece of planning I had to do was how to undertake the project and how to design the conservatory and was it would be best located on the house. To do this, I made a small cardboard scale model of the house so that I would have a better understanding, I then made 3 different designs of a conservatory in which I felt would be the best designs that could be used. I also took into consideration the aspect of the house and is where the sun will shine most in the room.



### Planning the Design

I had to plan how I was going to make this project. I decided to make it out of the foamcore board because it is easier to make the project out of. In order to make a model of the house I had to examine the plans of the house very carefully and to decide a suitable scale for the model. I decided that 1:16 would be the best. I would not make a model of the whole house as it would be pointless but instead focus on the conservatory where it joins the gable of the house. By drawing out new plans by hand so that I would have a clearer understanding of the house I then had the measurements I needed so I could transfer them onto the foamcore board and then cut the parts I wanted.



### Choosing a Suitable Finish for the Design.

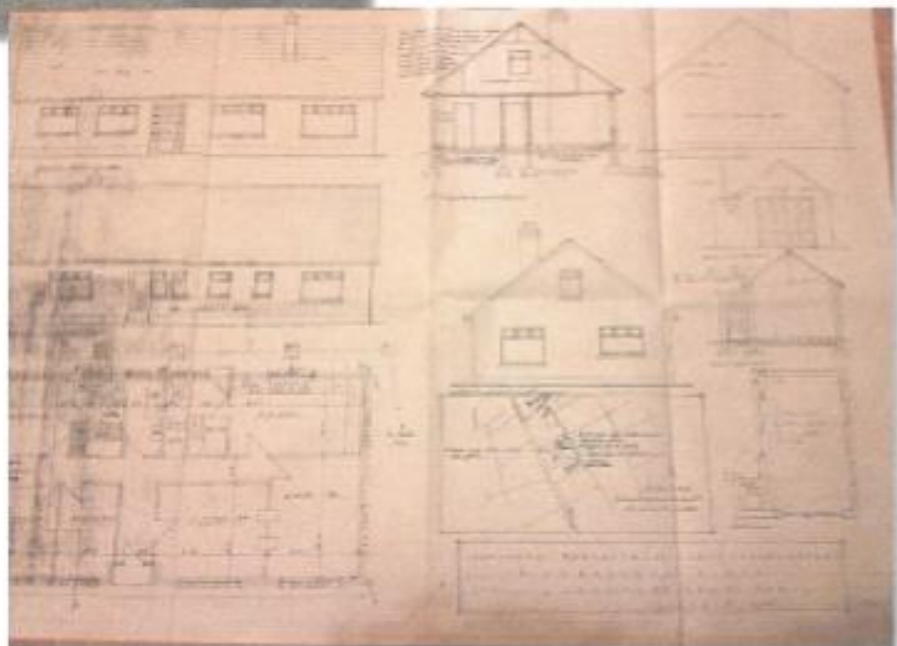
I had to plan what I was going to put as a finish on the house when I had it constructed. The original house is finished with a peppledash finish and I felt that I would have to decide what would be the best method of making the model look really realistic. I did not know which finish would reflect a realistic look best so I planned to make the finish as one of my experiments. When I found out which finish would be the best to use I decided to use the ceiling texture paint as I gave out the best and most realistic look.

## Chapter Three

### Research & Investigation

#### Choosing a House:

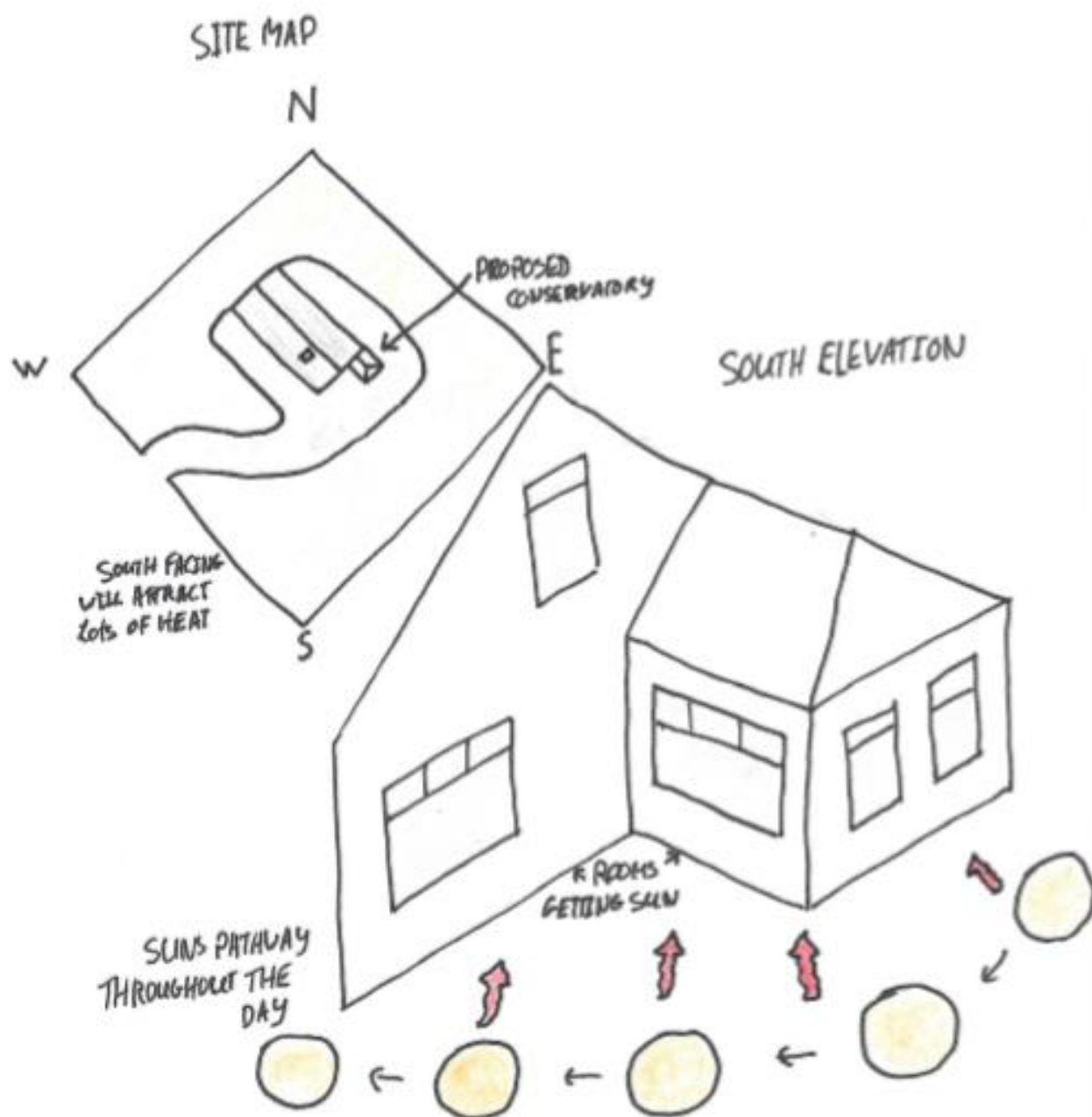
I was in my neighbour's house one day and I saw the plans of the house. I then decided after looking at these plans that I may be able to make a suitable project for my construction studies, after looking at the plans I decided that I would like to design a conservatory onto the side of the house. During my visit they gave me plenty of photos from the time when their house was being built and also gave me a book which gives all of the dates of different building stages in the building of the house. I found that these were very useful as I got a more clearer understanding of how and when the different sections of building associated with the house was done.





### Orientation of Conservatory:

For the conservatory to be beneficial I had to use the path of the sun throughout the sky to design which may be the best design for the conservatory and which will offer the most advantages. Where the conservatory is meant to be positioned; I will be using the south facing side to get the sun into the room for as much of the day as possible. When choosing the design of the conservatory I took many factors into consideration and after examining all of these factors I decided to go along with the hipped roof design as I felt this would look the best on the house and it would also have a large window facing south.

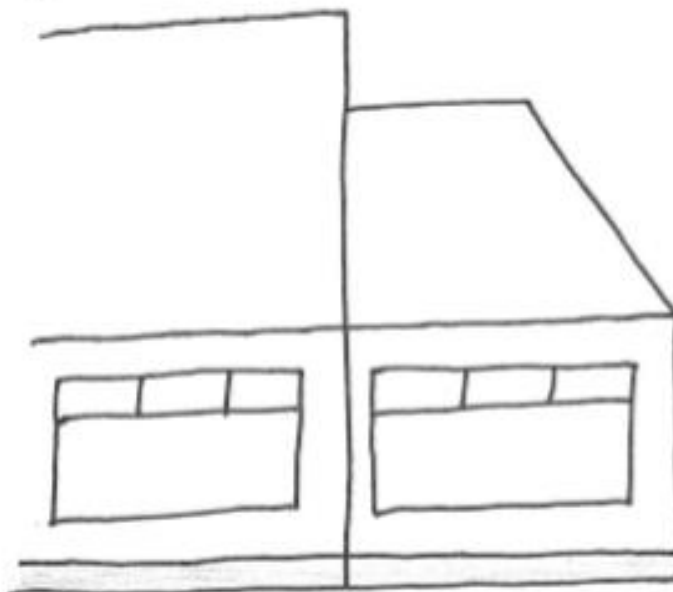


## Design Features:

I was unsure at the beginning of the project if I would keep an original look to the conservatory to tie in with the remainder of the house or to make a new design which would look completely different to the house. I decided to go with an original look and made the windows approximately the same size as the rest of the house to make it look a part of the house. I felt that it was important to do this because the house is in an open area and can be seen from far around and I would not like the conservatory to stand out too much, so that is why I decided to make the conservatory the same design as the original building.



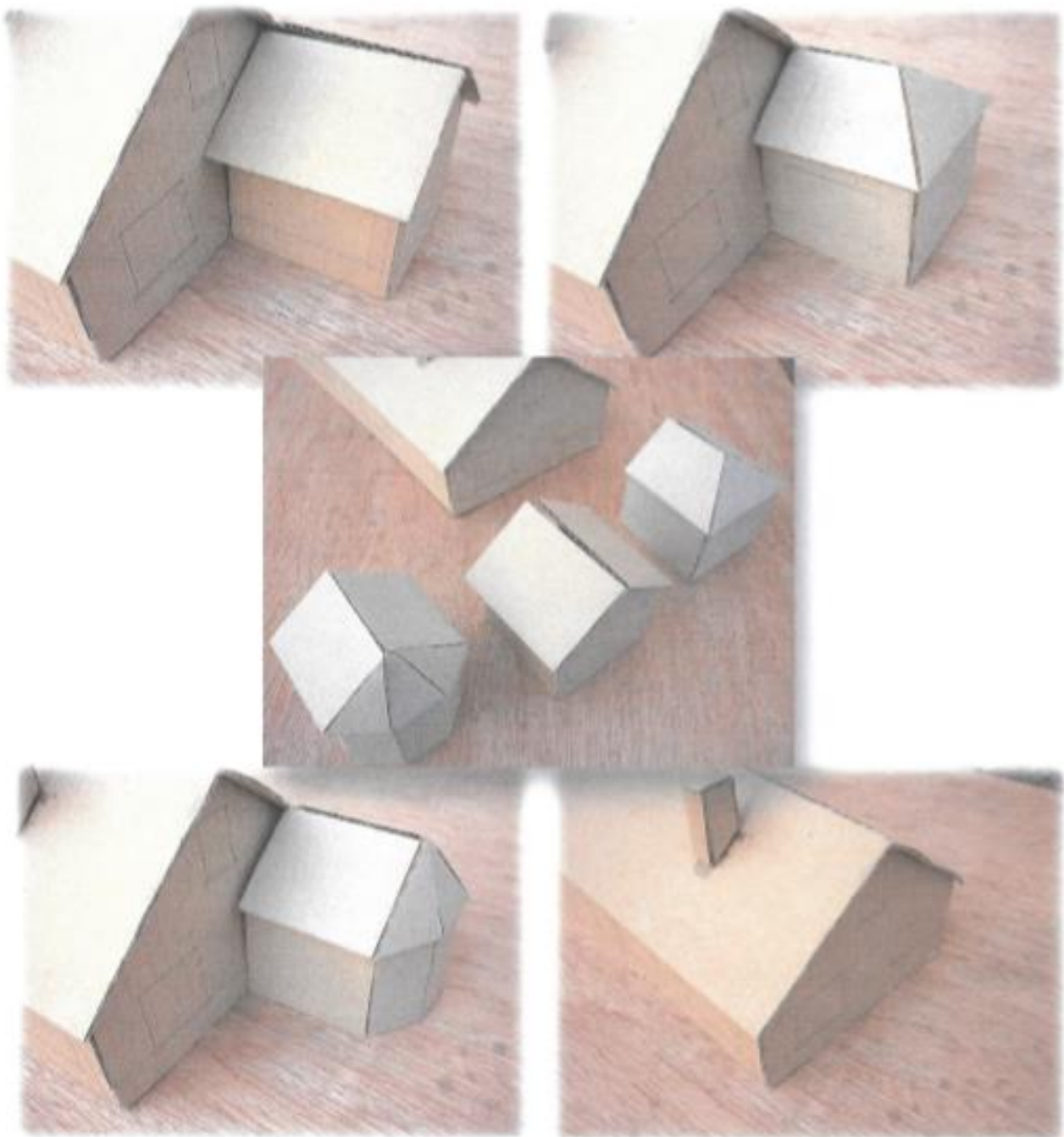
1<sup>st</sup> IDEA  
WINDOWS DO NOT REFLECT  
ORIGINAL HOUSE.



2<sup>nd</sup> IDEA  
WINDOWS IN EXTENSION  
REFLECT EXISTING HOUSE.

### Use of Models:

To fully understand all of this above I decided that the best thing to do was to make a cardboard model to get a clear understanding of the different ideas that could be used for this project. I made a model of the house and then I made 3 small different designs of a conservatory. I used these to get a rough look of the different designs so that I could decide afterwards which one of these designs would be the best to use. I also painted a sample piece of foamcore board to see what the pebbledash finish would look like and I was happy with the finished result because I felt that it made the project look much more realistic





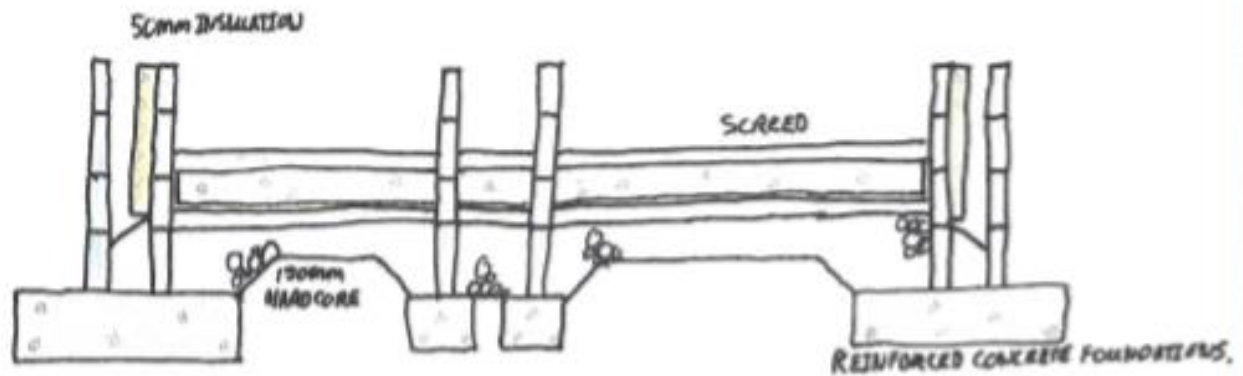
## Chapter Four

### Real House

#### Foundations:

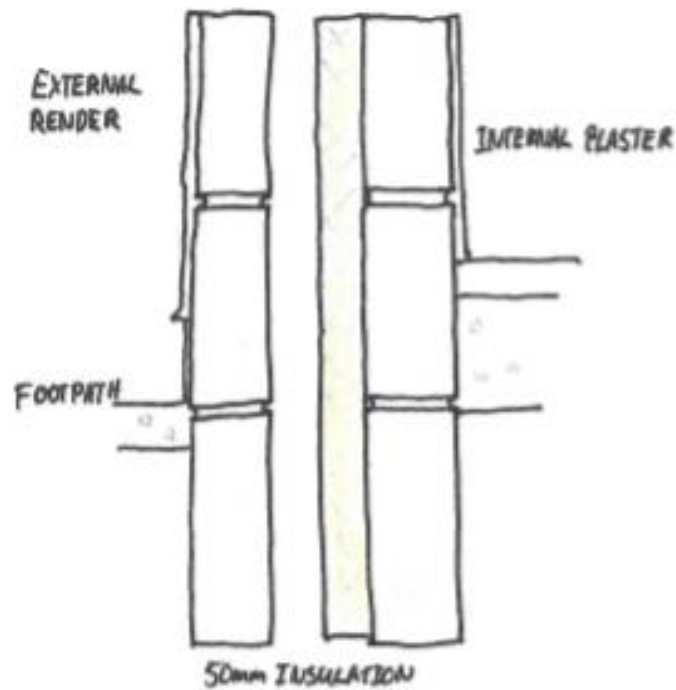
The house was built using a standard strip foundation, the soil type in the area has a good load bearing capacity and a strip foundation was the ideal foundation for this type of soil. The soil in this area is not boggy and has a good bearing capacity.

CROSS SECTION OF HOUSE



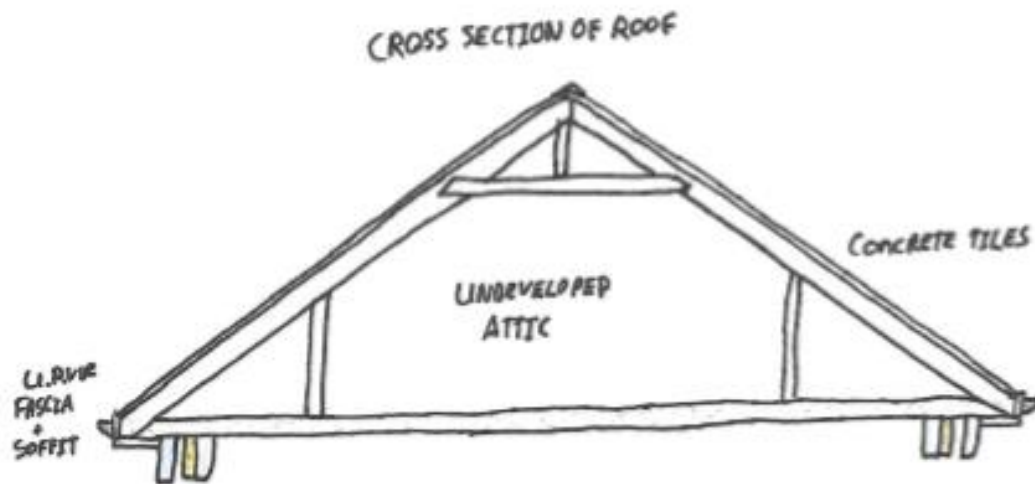
### External Wall:

The external wall of the house is a 300mm concrete block insulated cavity wall. The cavity is 100mm and has 50mm of insulation. The finish on the external walls is a pebbledash finish and it is painted white with a black plinth. The interior walls are all painted.



## Roof:

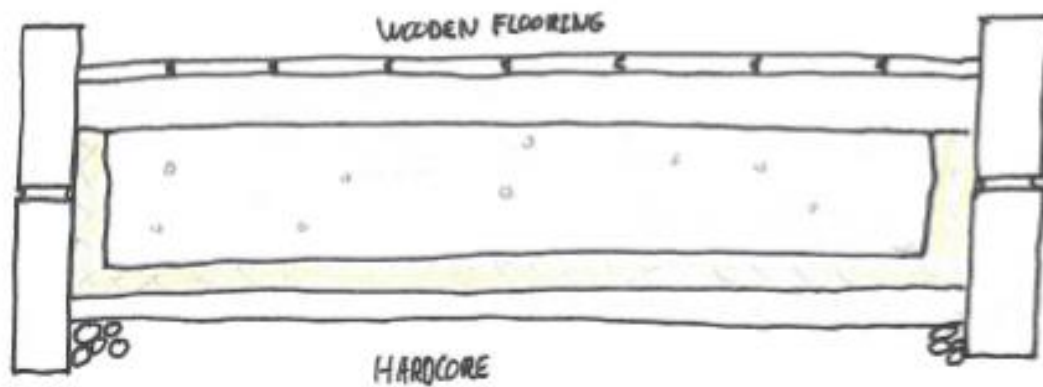
The roof of the house consists of glazed concrete tiles 50 x 25 wooden battens the roof has 110 x 40 rafters. The roof is not prefabricated and the attic space can be converted into bedrooms. The house also has a white upvc fascia and soffit.





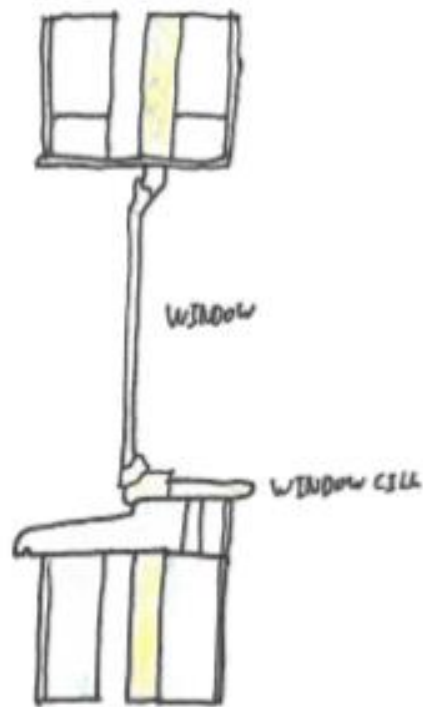
### Floors:

The floors are made from 150mm concrete screed which sits on 25mm insulation, blinding and 150mm hard filling. The floors inside the house are carpet and lino and are many different colours which reflect the colours of the rooms. As of 2015 there is now a new wooden floor being put into the hallway of the house.



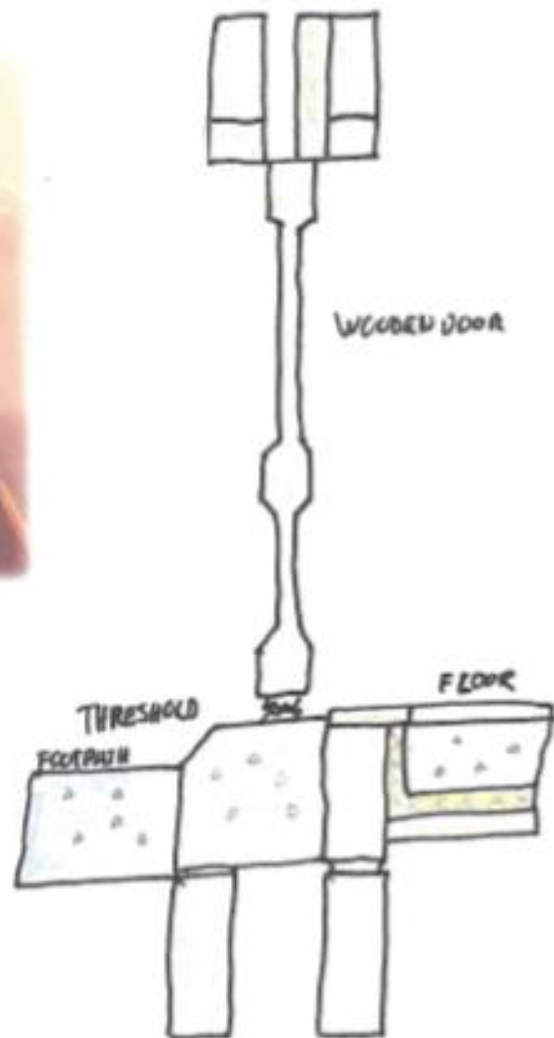
## Windows:

The windows on the house are large windows to the south and smaller windows to the north; this is beneficial because it takes advantage of the sun and the heat from the sun which heats the used rooms. There are 4 windows to the front of the house two either side of the door. These windows catch great sunlight throughout the day as they are facing a south.



## Doors:

The house has all wooden doors. The exterior doors are painted and the interior doors are varnished. The interior doors are made from pine.





## Chapter Five

### Making of the Model

On the first day that I started my project I was marking out the sizes of the model on the foamboard. We used foamboard because it is easier to use and much easier to cut out small windows and door openings in it. I continued measuring out all the components of the model and then I drew them onto the foamboard. To cut out the pieces I used a knife to cut out the sections for the windows and also for the doors. When this was complete I now had five pieces of foamboard that was going to be my project.



I then began to join all of these pieces together to make the shell of the conservatory. Instead of using nails and hammers as I would need if using plywood I instead used small pins to insert into the foamboard. This was very useful because if I needed to take a pin back out it wasn't too hard to do so. The pin had to be put in at different angles to ensure they held all the pieces together. When all of the pins were holding the model together the project was now a shell.

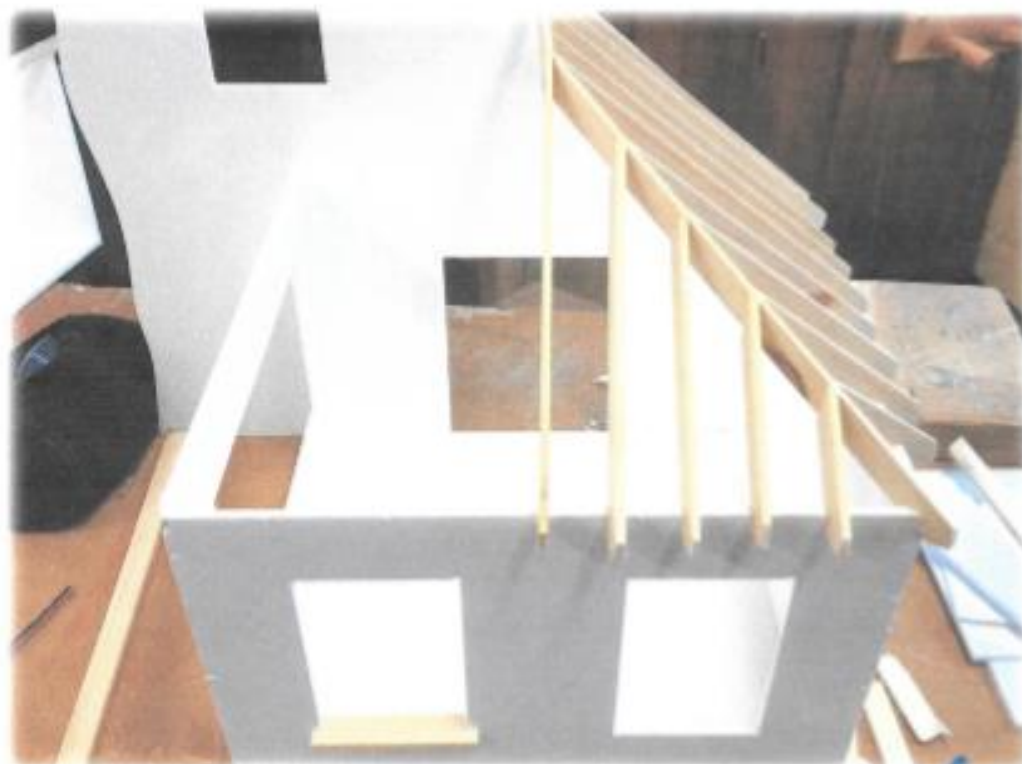


When shell of the model was made the next thing to be done was the windows, I cut small pieces of wood on the band saw into small little strips, and I then cut them individually to the correct size for each window. I used the sander to sand these small pieces down a lot more



and eventually fitted them all into the project. The windows I designed reflect the original windows of the main house and I did this as I wanted to maintain the same look of the original house in the new extension.

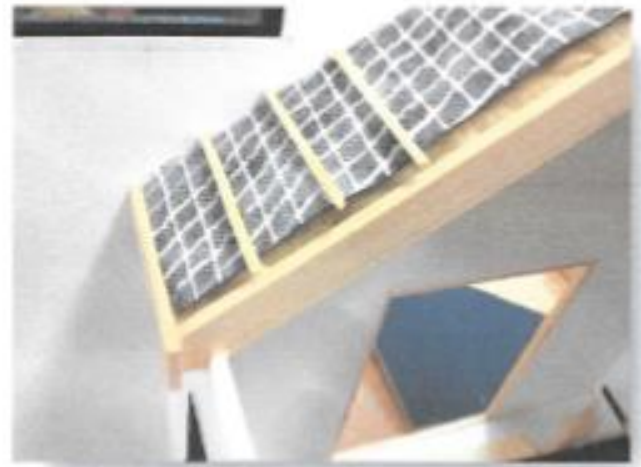
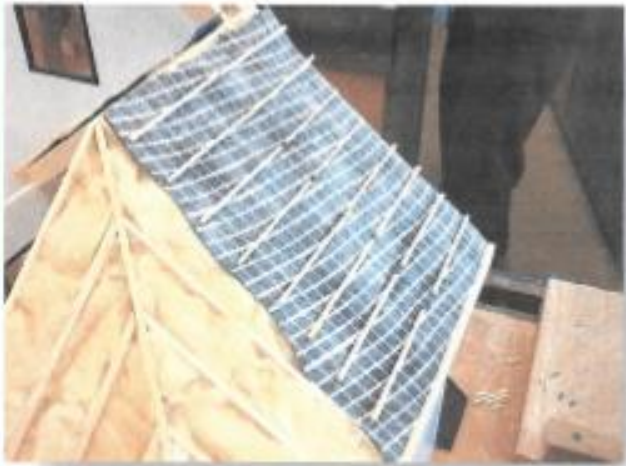
The next thing I moved onto after making the windows was to make the roof of the house. I did this by getting small rafters and cutting them to the sizes needed which would be suitable for my project. I decided to do a hipped roof because it would not cause a shadow on the upstairs window at sunrise. I cut out the rafters using the band saw and then sanded them down better so that they looked more presentable, when I stuck all of the rafters to make the shell of the roof I cut a small strip of wood to put onto the house as a fascia board.



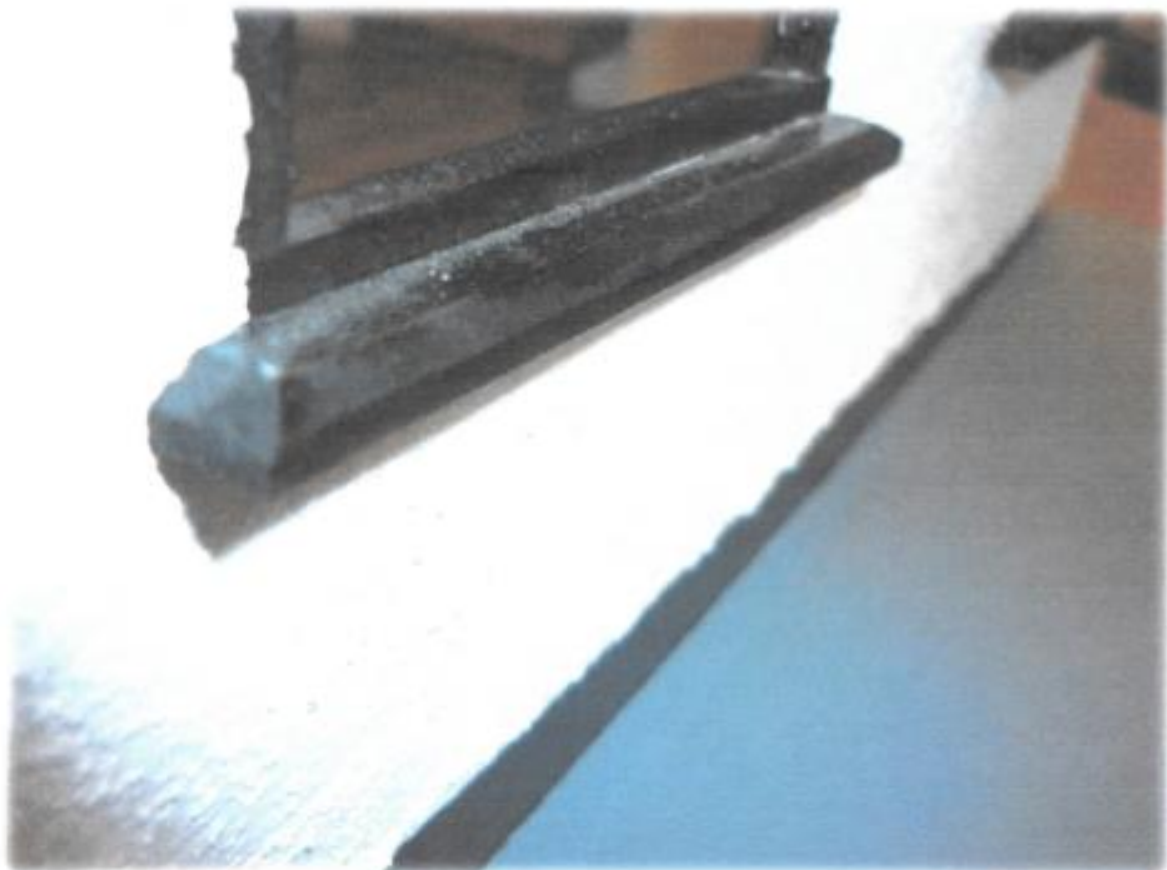


I then decided to make the overhang of the gable of the main house to show how the roof looks on the main house. When I had that complete I stuck a piece of wood on the inside gable of the house to show where the ceiling joists are going across the first floor. I then got some fibreglass insulation to put into the rafters and I put this between every rafter in my house to show where the insulation is positioned. I cut a small piece of felt to place on top of the rafters and insulation and then I used a layer of felt on top of this. Then after that I placed the battens on the felt, the battens were small match sticks and they were very easy and useful to use as battens. On top of the battens I placed some black card which resembles the look of a slated roof; I made sure to put less of each of these components to show the individual layers needed for the construction of the roof.





The next step for me was to make window sills for the house. I did this by cutting small strips of wood and then sanding them to resemble the look of a window sill. When I was completed with this I painted the windows and window sills black as this is the colour of the windows on the real original house. The windows were nearly now ready to be put into place.

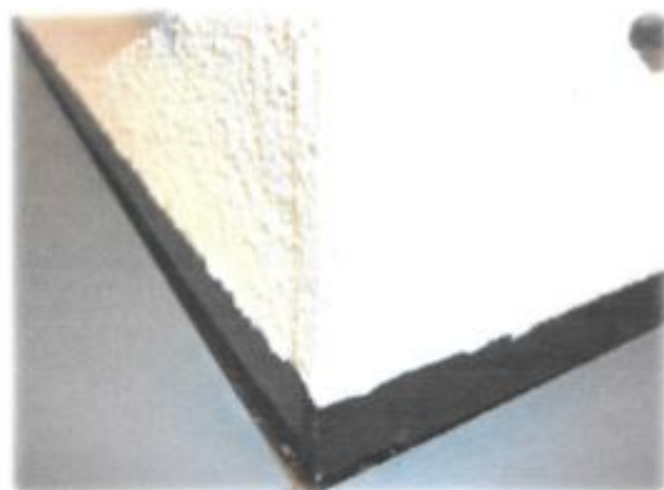




After doing experiments to find the most suitable looking doors for the inside of the house I printed out a picture of a door from the internet and I stuck this onto a piece of foamcore board. I then made the surrounds for the doors out of wood by cutting small pieces of wood to the exact size.



The next thing for me to do was to paint the house using the textured ceiling paint. For this, I removed the windows of the house and painted it using a paint brush. It was hard to paint it as it was very thick and it was awkward to spread it nice and evenly to have a consistent amount on the project. I painted a small piece before doing the house and I noticed that it warped slightly so I painted the other half of the foamcore board with cream paint and it no longer warped. So when I was painting the main house I painted both sides within a short time and this stopped the house from bending or warping. I painted two coats of cream paint in the insides of the house as it showed of a better colour the second time.



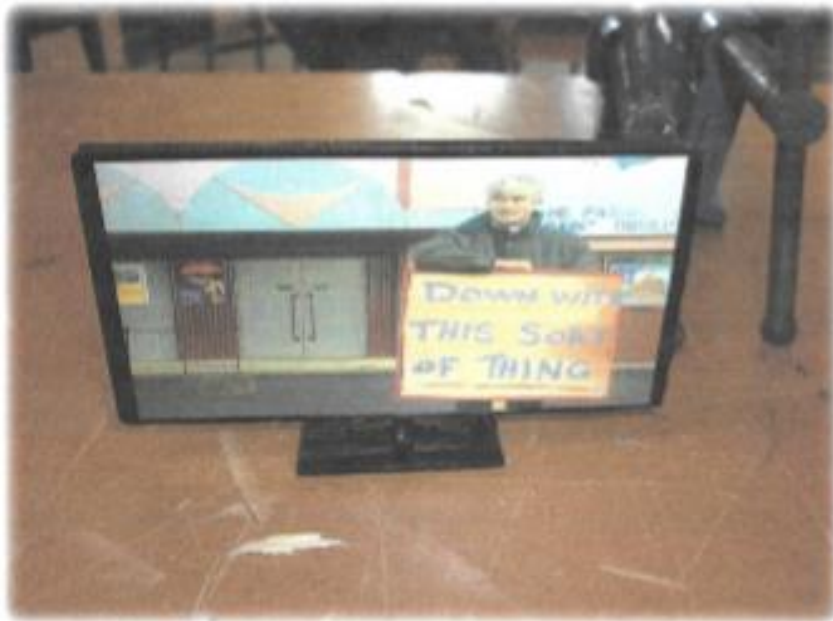


I then moved onto sticking the windows back to the project and I also painted the door frames a wooden stain to make them look more realistic. Then I got a piece of floor lino which had wooden patterns. I carefully measured the inside of the house and cut the lino out to the exact measurements of the inside of the house. I had to be careful when doing this because if I cut too much off it would not have a snug fit so I cut off small trimmings at a time to make sure it would fit, and eventually it did fit into the house perfectly. The wooden floor looked very well in the house now and it made it look more realistic looking. After all of that was done I stuck the window sills onto the house and this made it look really well presentable now.

The next step for me to do was to make furniture for the inside of the house. I decided to make furniture for the inside to fill up the room so that it would make the house look more presentable and it would also reflect the true living space of the house. The first thing I decided to make for the house was a small TV unit. I made this simply by cutting two small pieces of teak wood and then stuck them together. Then I used a satinwood varnish to give it a finish. By varnishing the teak it really brought out the best of the wood and made the wood look very presentable and nice.



The next piece of furniture to make for the house was to make a TV. I was unsure at first what to make it out of but then I decided that it would be best to make the screen out of foam board. I made the stand of the television out of wood. Then I painted it all black. When the paint dried I then stuck small picture on it to make it look like the television was on.



I then made a small coffee table by using small pieces of wood which I used for the rafters. I stuck these pieces together and then I put small legs on the table to make it stand. I then painted this table using a varnish.



I also decided to make small bookshelves for the room. To do this I cut two small blocks of teak wood and I then varnished them, I then printed of a picture of books and stuck it onto the bookshelf to make it look like a book shelf.



To make the couch for the house I got some teak wood and I started to cut the sides of the couch using a jigsaw. When I got one side cut I used this as a template and then I cut a replica for the other side of the couch. Then I cut two long strips of the wood for the seat part of the couch, after I stuck all of these pieces together and varnished them I cut some carpet to a specific size so that it would make the look of a cushion on the couch.



To make the upright clock I cut a small piece of teak wood using the jigsaw again. After I was finished I varnished it and printed of a small picture of a clock to stick on it to make it look more realistic.





## Chapter Six

### Evaluation of Project

#### Do I feel the project was planned well?

The planning of the project was a very important part of the making of this. I feel that in parts of the planning I may not have focussed entirely on certain aspects of the project, but I do feel that It was realistic because it did work out well in the end. I felt that when making the roof I spent a lot of time doing that when I could have maybe used some of that extra time on another part of the project. I think what delayed me most with the roof was trying to get the correct pitch for each of the rafters and having them at equal lengths and sizes.

#### How well does the finished product work?

After finishing this project I feel that it does work well. I personally feel that it is a good representation of the building and also it seems to reflect the look of the original house and this is what I intended on doing. The design of the project I feel would be very beneficial as I feel it would tie in with the original house and also the way the roof of the conservatory is hipped helps not cast a shadow on the upstairs window from the early morning sun. If I was making this project again I feel that I would plan it out to make the conservatory slightly larger than it is in the project because I feel that it may be a bit small and might also be awkward to move around the room as it would get full very quickly. I also felt that the door opening from the house to the conservatory is narrow and if I was doing it again I would perhaps widen the doorway for better easier access.

### The Projects Appearance:

The finish for this project was always intended to be a pebbledash finish but at the beginning I was unsure what would be the best representation of pebbledash on a small model. I used the ceiling textured paint and I felt that this really did boast the pebbledash look as it has small pieces in it which resemble the look of a real life house. I was happy with the finish on the project and I feel that it was the best and most realistic looking. The scale of this project is quite big but because I was only focussing on this part of the house I felt that it was more beneficial because it made it more realistic looking and also it showed the different sections of the roof in better detail because of its larger size. The exterior walls I believe reflects the feel and look of the pebbledash on the real house but in the conservatory I used a piece of lino which has wooden patterns on it but the wooden patterns are far too large and are not to scale, at a distance it looks good but in close inspection it can be seen that the segments of wood are much larger than they should be. The colours in the house look well and offer a better feel to the house than the plain white colour of the foamcore board. The cream colour offers a warm feel to the conservatory and it matches with the colour of the wooden lino. The exterior edges of the house are clean cut but in some places inside the house it is visible that the walls are a tiny bit damaged around the window openings and the doors. It is more visible from the inside than the outside of the house. The model appears to be sturdy and I believe that the paint added a more sturdiness feel to the project because it seems to have bound the walls together. I am also very happy with how the furniture turned out inside of the house but I would have liked to make some small artefacts for the garden outside the house as I feel it is a bit bare.



## Chapter Seven

### What I learned from the project

#### Skills:

I have learned many new skills throughout this project. When I first saw the foamcore board I wondered how I could make a house out of it but in the end I got there and I learned how I can make things using it. I also learned about cutting rafters and measuring the angles of them and how they are positioned on the roof to have an accurate pitch. Before undertaking this project I could not have done this on my own as I would not have known where to start but by learning different skills such as how to make the rafters for the house I was able to undertake this project. A big skill that I have learned is managing of production. It was important to note that time was the essence. I also learned how to manage time better and how to go about making an accurate project within the time. During each class I would try and set a goal for what I wanted to have done by the end of the class. I had to use my time wisely whilst doing this so that I could achieve this goal. It was also important to plan ahead and make sure I needed the correct materials in order to continue on with my project.

#### Knowledge:

From the making of this project I have actually gained a lot of knowledge. I did not think that I would have gained much but through the practical work and planning that was done for this project I gained a lot more knowledge about how a house is built. A major piece of knowledge that I gained was the way in which a roof of a house is constructed. Before undertaking this project I had a rough idea but after completing the project and manually doing it I felt that I had a clearer understanding of how all of the different components play a role in the making of a roof. It was now easier to understand the different parts of insulation felt and battens because it was now in black and white to me.



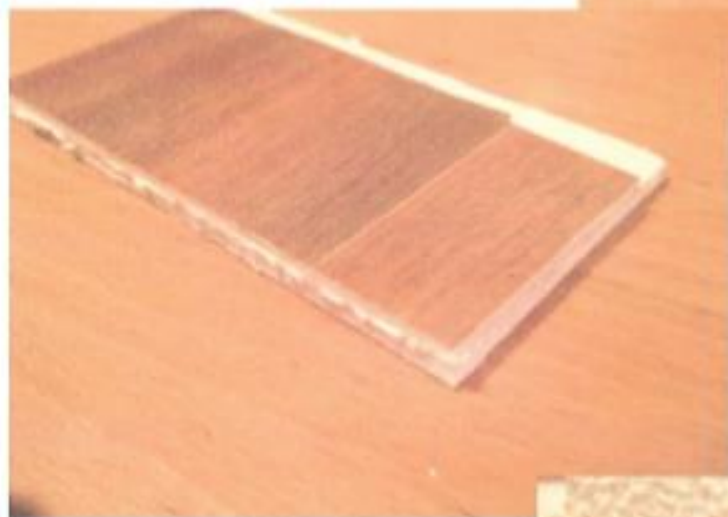
### Myself:

After making this project I feel that I have not only learned new skills and knowledge but I have also learned a lot about myself. I have learned that I work well both independently and as part of a team. I can manage to get a lot done whilst working on my own but I also can get work done when working in a group situation as we exchange thoughts and ideas and lend a helping hand if needed. I prefer to work as part of a team because people is around and if there is any advice needed we can all share our opinions. I feel that I am an organised person because I planned the project out and I would wish to have all materials with me before I start making the parts. Personally, I like to work in an area with all the materials I need within reach of the project so that I am not wandering around the room looking for different materials wasting time. If I come across and encounter along the way I see it as a task to try and get past it and get on the other side again. When I was painting the pebbledash finish onto the house I did it on a test piece first and I noticed it started to warp the piece so what I did was quickly paint the other side of the piece with paint and the warp soon left the piece. I then continued to paint both inside and outside of the house and this prevented it warping and thankfully it did not warp.

## Chapter Eight

### Experiments

1. Best Interior Doors.



2. Most Suitable Flooring.

3. Best Finish.



## 1<sup>st</sup> Experiment

### Title:

Using various materials to create interior doors for the scale model project.

### Introduction:

This experiment is being carried out to investigate a suitable method of making interior doors for the scale model. I have decided to experiment with 3 materials and methods.

- ❖ Making scaled versions of doors.
- ❖ Using printed picture of door on foamboard,
- ❖ Using printed picture of door on wood.

It is hoped that by the end of this experiment I will be able to draw on some conclusions as to what is the best methods to use to create the interior doors and which method is best in some of these areas:

- ❖ Ease of use.
- ❖ Not too costly.
- ❖ Time it takes to make.
- ❖ Easy to rectify if any problems encountered.
- ❖ Sturdiness of doors.
- ❖ Visual effect of doors on overalls project.

### Preparation and Planning:

To begin the experiment I will make small portions of the doors that will be needed in the model house. I will use different materials for the duration of this experiment in order to make the different designs and methods of doors.





### Procedure:

Some key points to identify during experiments:

- ❖ Ability to work with the materials.
- ❖ Timing of each task carried out.
- ❖ Finished product on model project.
- ❖ Cost of materials.
- ❖ Gluing of picture on the materials.
- ❖ Difficulties arising during task.

Tools, equipment and materials used during the experiment:

- ❖ Cutting Knife
- ❖ Saw
- ❖ Glue
- ❖ Sander
- ❖ Paper
- ❖ Wood

### Results:

The first method that I used for this experiment was the making of doors using wood. This proved to be very difficult and a great need of determination and effort was required to make these doors. The doors was made using small pieces of wood which I then stuck together to make the door. Some difficulties with this task was that is a mistake was made the door would have to be restarted again.



The next method I decided to do to make doors was printing a picture and sticking it onto a piece of foam board. This method was very easy to do and did not require much time or effort either. It was not hard to stick the small picture onto the foam board and I also then made small handles out of wood and stuck them into place also. This method was fast and easy and was also not costly.



The final method was much similarly to the previous one. To do this task instead of using foamboard I decided to use wood. I stuck pictures of doors on either side of the piece of wood to make it look like a door, this method was very quick to do and also if a problem arose it would not take a lot of time to correct it. This method was not costly as it was using pieces of wood and pictures



### *Conclusion and Evaluation of Results:*

The first method in which I created the doors out of wood was very hard to do. This method required a lot of time and dedication to make such a small thing. There was also no room for error in this method because if any mistake was made it might mean a total restart. It was not costly. This method looked well at the end of the task as it had a realistic look to it and it also blended in well with the model house.



The second method was using the printed image of a door on a piece of foamboard, this method was not hard to make at all compared to the first method, this method was also not costly and did not require a great amount of time. It was not a major problem if a mistake was made because unlike the other method the pieces could be easily cut out using a knife. The picture of the door was stuck onto the foamboard using glue.



The final method of this experiment was using wood and then sticking a picture of a door onto it. This method did not take long as it was an easy object to create. Also if there was a mistake made it was not major because it could be easily repaired unlike the first method. What makes this method stand out from the second one even though they are very similar is that this door model looked better on the house model because the sides of it were made of wood unlike the foamboard.



*Comments:*

This experiment was very beneficial to me as I was struggling to decide which would be the best most convenient way to make the doors for the model house. This experiment helped me greatly because it made me realise that the best method might not always be the hardest. It was also beneficial to me because by doing this experiment it gave me an idea to the amount of time I could spend doing this when I could be using that time better by doing something that is more crucial. At the end of these experiments I also got a choice as to what door looks best on the project and what one is the easiest to make. By doing this, I feel that I have gained a more clearer understanding of the project and ive also added my own personal touch by doing this experiment.

## 2<sup>nd</sup> Experiment

### Title:

Using different sorts of flooring to determine which is the best for the scale model project.

### Introduction:

This experiment is being carried out to investigate a suitable flooring that can be used in the interior of the scale model. I have decided to experiment with 3 materials.

- ❖ Carpet.
- ❖ Vinyl.
- ❖ Printed tiled image.

It is hoped that by the end of this experiment I will be able to draw on some conclusions as to what is the best materials to use and the best in some of these areas:

- ❖ Ease of use.
- ❖ Cost.
- ❖ Time it takes to make.
- ❖ Easy to rectify if any problems encountered.
- ❖ Applying of surface to project.
- ❖ Visual affect the finished surface has on the project.

### Preparation and Planning:

To do this experiment I will use small pieces of foamboard to imitate the floor of the real project. I will stick the 3 different floor finishes onto each piece of foam board and analyse which one is best suited for the model house and which one is easy to make and easy to install. I will then decide from the results which method and material would suit the model best.

### Procedure:

Some key points to identify during experiments:

- ❖ Ability to work with the materials.
- ❖ Timing of each task carried out.
- ❖ Sticking of finish to model project.
- ❖ Cost of materials.
- ❖ Having the floor to the scale of the project.
- ❖ Difficulties arising during task.

Tools, Equipment and materials used:

- ❖ Cutting Knife
- ❖ Glue
- ❖ Carpet
- ❖ Vinyl
- ❖ Printed Tiles
- ❖ Scissors

### Results:

The first method of this experiment was using the carpet on the floor. To stick the carpet to the foamboard it was easy to do and also did not take much time to do. It was easy to cut the carpet to the size I wanted as I only had to use a knife. By looking at this method it appeared that the carpet was very large on the floor and caused the floor to look very large and out of proportion.





The next method which involved sticking vinyl to the same base as the carpet was not hard to do. Again I used a knife to cut the size of material I needed. It was also not deer to do as I had all of the resources at home. The vinyl looked well but it is not to complete scale.



For making a tiled finish I printed of a picture of tiles from the computer. I then used glue to stick the sheet of paper onto the foam board base. This method did not take too long to do. If needing to join pieces of the tiled finish it would be hard to join the pieces as it would need a continued flow.



### *Conclusion and Evaluation of Results:*

Whilst doing the carpet I noticed that it was easy to fit onto the piece of foamboard. The carpet was very easy to work with and it was also not too costly as it was a piece of old carpet and not new carpet. This task did not require much time, however I felt that the carpet finish was too out of scale for the project and that the carpet was too deep and the patterns were too large for the room it was in. Also because of the depth of the carpet I noticed that it would be hard to put small furniture in the room as it would not have an even surface to sit on.



The vinyl floor finish looked well on the foamboard. It was very easy to work with as only a knife was needed to cut the piece. Cost was no issue in this method. It also stuck well onto the foamboard and gave a smooth finish to floor unlike the carpet, however in this method the patterns on the vinyl looked slightly large in the model but I felt that this method would be the best for my project.

The final method I did in this experiment was the use of printed images of tiles and then sticking them onto the project. This method was not costly but did take more time than the others because I needed to print out the pictures and cut them at certain sizes. One downfall with this method was that where pieces need to be joined it would be hard to join them together. In this method I could alter the size of the tiles which would allow it to fit into the scale of this project.



*Comments:*

I believe I gained a lot of experience from this experiment as it helped me and the progression of my project. I did not believe that so many factors would play a part in this experiment. It also gave me the chance to try using different methods and to try and pick one suitable floor finish that would be the best all over a range of different factors. One factor that was a major part of this experiment was to get a suitable floor that would look good in the project. The carpet was too bulky looking in the project and that is why I decided to not use this one. The tiled finish was very difficult due to the fact that they were hard to get to the right size and it was also hard to join the pieces. This experiment like the others was very beneficial to me because I investigated different flooring and decided which one I would prefer the most in my project.



### 3<sup>d</sup> Experiment

#### Title:

Using various materials to determine a suitable pebbledash finish for external walls of the project.

#### Introduction:

This experiment is being carried out to investigate a suitable pebbledash finish for the scale model. I have decided to experiment with 3 materials.

- ❖ Ceiling Paint
- ❖ Painted Salt
- ❖ Painted Sandpaper

It is hoped that by the end of this experiment I will be able to draw on some conclusions as to what is the best materials to use and the best in some of these areas:

- ❖ Ease of use
- ❖ Not too costly
- ❖ Time it takes to make
- ❖ Easy to rectify if any problems encountered
- ❖ Applying finish to model
- ❖ Affect the finish has on the project

#### Preparation and Planning:

To begin the experiment I have decided to use small pieces of the foamcore board, as this is the external walls of the project. I use these pieces to get a clear understanding of what finish will be best suitable to the project. I used small pieces of the foamcore board and not a scale model of the project as this would be very time consuming and would not be of much benefit to me for these experiments.

### Procedure:

Some key points to identify during experiments:

- ❖ Ability to work with the materials.
- ❖ Timing of each task carried out.
- ❖ Sticking of finish to model project.
- ❖ Cost of materials.
- ❖ Painting over the materials.
- ❖ Difficulties arising during task.

Tools, equipment and materials used during this experiment:

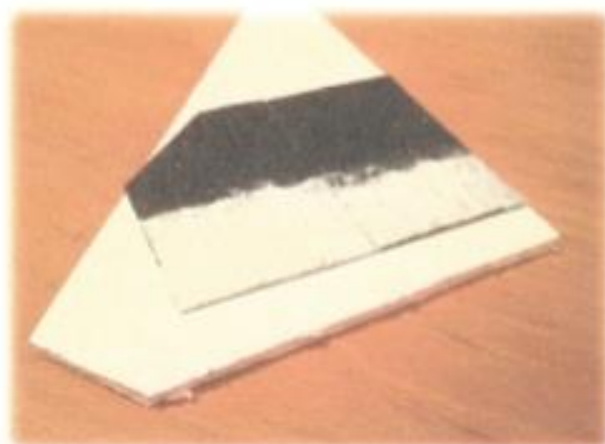
- ❖ Glue
- ❖ Paint brush
- ❖ Stanley cutting knife

### Results:

The first part of the experiments was by sticking salt onto the foamboard to get a pebbledash finish. This task was quite time consuming and it had to be done in different sections as the glue would dry too quickly. I also noticed that by sticking the salt onto the foam board it was hard to get an even layer of a salt finish on the entire house. The glue had to be spread to all parts of the walls and had to cover exactly every area of the house. However this method was very cheap and was very low in costs.



Another method of getting sand paper and painting it was not quite effective because in this experiment. I had to paint the sandpaper with white paint and then I stuck the sandpaper onto the foamboard. This look was not great on the foam board and it was visible to see where the different pieces of sandpaper joined each other. This method did not take very long to do and it was also very cheap to do because the sandpaper was easily got.



For the last method I used ceiling paint, this was used by painting one layer onto the foamboard and tapping it lightly with the brush, then I added another layer to the foamboard and this time tapped it with the brush to get a rough rugged finish which would resemble a pebbledash finish. The time it took to do this method was not to long but the cost of this method was more than the others because the ceiling paint cost more money than the other two methods.





### Conclusion and Evaluation of Results:

The salt method although when finished did not portray a good look for the pebbledash finish. It was very time consuming and required a lot of time to complete the task. This method was also hard that every single part of the wall had to have a layer of glue before the salt was put on because if not all parts were glued then there was bare patches on the walls where no salt would stick. Also the salt appeared to dissolve together and instead of giving a rough finish it looked to blend together.



The sandpaper method also didn't portray a good image. It was not too hard to stick to the house as some glue could be used easily to stick the pieces of sandpaper onto the house model. The cost of this task was not expensive at all. It was visible on the foamboard were the pieces of sandpaper joined together.

The ceiling paint gave the best realistic look to the project and really boasted an impressive pebbledash finish to it. This was easy to stick onto the foamboard because it was just basically painting the walls of the house. It did not take very long to do this method but the only major downside of this method was the cost, the cost of this task was much dearer than any of the other task



*Comments:*

I found that this experiment was a great choice of experiment as it gave me a clearer insight as to what method would be best to use to get a suitable pebbledash finish on the model house. By doing this experiment, I also used a lot of research as to find which method would be the best and the most realistic. By practically doing these experiments I also gained experience of how to apply the various materials to the project and that I would not be doing it for the first time on the actual model of the house. This experiment has made me have a more vivid imagination on how to create a suitable pebbledash finish for the model house.

## Chapter Nine

### Bibliography/Websites/Emails/Letters

- ❖ School construction studies website for all information about the project.  
<http://bppcs.weebly.com/>
  
- ❖ Tiled floor picture for 2<sup>nd</sup> Experiment.  
[http://www.homnara.com/wp-content/uploads/2014/07/types\\_of\\_tiles\\_used\\_for\\_flooring.jpg](http://www.homnara.com/wp-content/uploads/2014/07/types_of_tiles_used_for_flooring.jpg)
  
- ❖ Picture of doors used for the project.  
<https://s-media-cache-ak0.pinimg.com/236x/38/43/90/3843902d6b8cba0d4ef8b058ef31b837.jpg>
  
- ❖ Clock face.  
<http://thumbs.dreamstime.com/z/retro-clock-face-4527639.jpg>
  
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