
The Sound of Music
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Production Project ADMA5010

Module Brief

Task 1 – Process Workbook

- Must outline the journey through the module in your process workbook and reflect on learning and skills gained
- Assessed by the ability to select a range of appropriate methodologies and procedures including:

• Research and testing
• Development of ideas
• Progress pictures
• Explanation of set/prop/scenic art/ technical development
• Problem solving and technical drawings
• White card/ finished models/ maquettes
• A Completed working set/props

Task 2 – Produce production elements for a live project of The Sound of Music for the Carmarthen Youth Opera

Elements that client would like us to problem solve:

• The gazebo that is able to come apart as well as dancers be able to perform on the benches
• A stone wall bridge that can be deconstructed to be stored in the wings
• Birch trees to be carried on and off stage and held by children
• Banners with the Swastika, one of which that can be torn

Delivery date to theatre – 9th February 2026 Performances begins – Week of 16th February 2026

Module Brief

Task 3 – Presentation
Give a presentation in your production groups which informs the audience about how you have solved the practical problems demanded by the brief, focussing on production technique, methods and problem solving. You will need to understand the context of how your set/prop elements exist in the show to its full potential for the production.
Must speak for 10 minutes each.

Although we are in production groups that have a focus on a design element, workloads may vary so everyone needs to be aware of the whole picture and offer help where necessary. We will be working as a production team with individual responsibilities, but a group responsibility that the team is successful in all areas.

Task 4 – Evaluation
A 500-word reflection on what you've learnt throughout the module and how you will take these lessons forward. This will be at the end of the Process Workbook.

AI Statement

To the best of my knowledge, I have not used any AI. I confirm that I have not used any AI tools in the research and creation of this assignment. I confirm that I have not presented any AI generated materials as my own work. I confirm I have copies of my drafts, notes, and other resources I used, which I may be asked to provide in evidence.

Initial Response

In the beginning of our module, we watched the film released in 1965, produced and directed by Robert Wise and a production of Argyle Enterprises, Twentieth Century Fox. Then, we did a table read through of the script with music by Richard Rodgers, lyrics by Oscar Hammerstein II, and book by Howard Lindsay and Russel Crouse

The film - My initial response to the film was a positive one, I have seen it many times growing up and the music gives me a sense of nostalgia and reminds me of happy memories watching and singing along with my mum, who is a huge fan. It was interesting to revisit the film as an adult, I wasn't aware of the full historical context when I was a young viewer and had completely missed the fact that Rolf Gruber, the young telegraph boy and Liesl's love interest, was becoming a member of the Nazi party.
Watching the film as an adult, I now find Liesl and Rolf's relationship far less romantic but still take pity on the telegraph boy for becoming involved in Hitler's regime. I have also changed my mind about my favourite scenes and music; it used to be 'Sixteen Going on Seventeen' but after rewatching I found I loved Maria's wedding procession scene to 'Maria'.

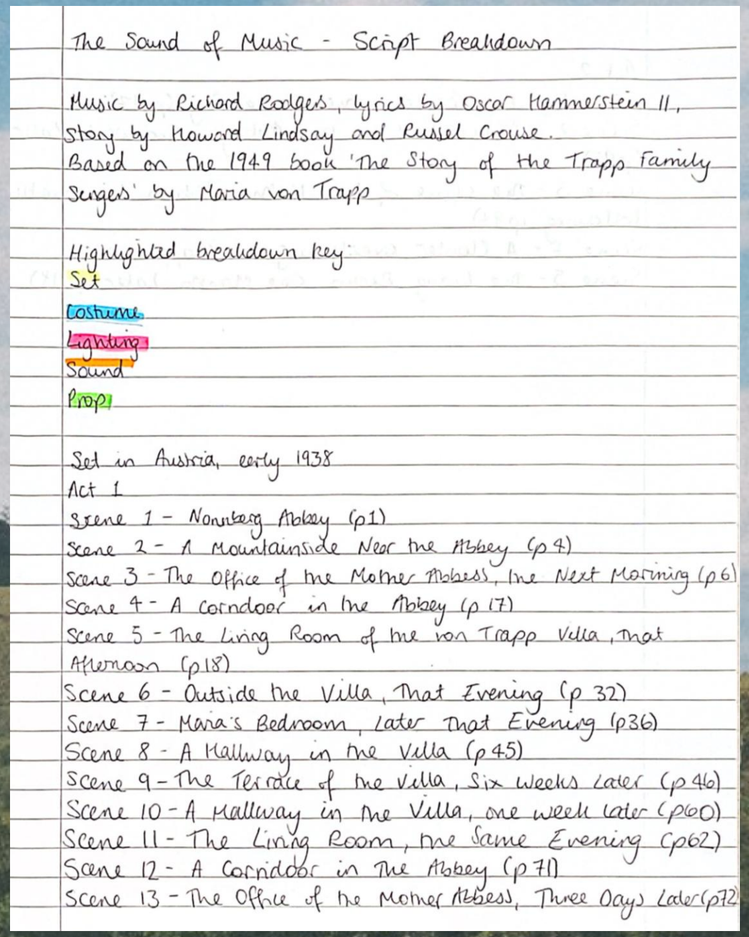
The script - I found there are some key differences in the script, like the placement of the music numbers and the amount of them, the script having a few more which I looked up on YouTube: Music no. 16: 'How Can Love Survive?', no. 33 'No Way to Stop It' and no. 34 'An Ordinary Couple' – the first two of which are Max and Elsa singing to or with the Captain, which gives the audience more of an understanding of their relationship.

I thought that the representation of some of the characters differs in the script vs the film. For example, Rolf is more antagonistic in the film, perhaps to simplify his role in the story and to create tension. At the end of the script, Rolf doesn't expose the von Trapp family to the Lieutenant and lets them pass so they can continue their escape but in the film he almost gets them captured. On the other hand, I found Elsa more likeable in the film. In the script, she comes across as kind but practical in her approach to the Captain and her agreement to marry and, in both new musical numbers with Max, we see a little more of a self-important side to her, where she is willing to be complacent in the Nazi's over taking of Austria. As designers, it is important that we consider both the film and the actual script for this production, as the director may want us to draw inspiration from both.

Script Breakdown

For me, a table read is a crucial part of my process as I tend to miss small details in the first independent read through. For this script, it was hard not to picture the film's locations and characters as I read stage directions and descriptions. Hearing the script read aloud, allows me to create images in my head rather than just look at the wall of text in the script.

During and after the table read, I broke down the script into its Acts and Scenes, highlighting any mentions of Set, Costume, Lighting, Sound and Props to help build the picture of the production in my head. Although our focus is on a few of the set pieces, understanding the context of which they exist i.e. when they are used, by who and the general setting of the play, is crucial for our design process.
From here, I was able to answer the analysis questions and make notes for character break downs.

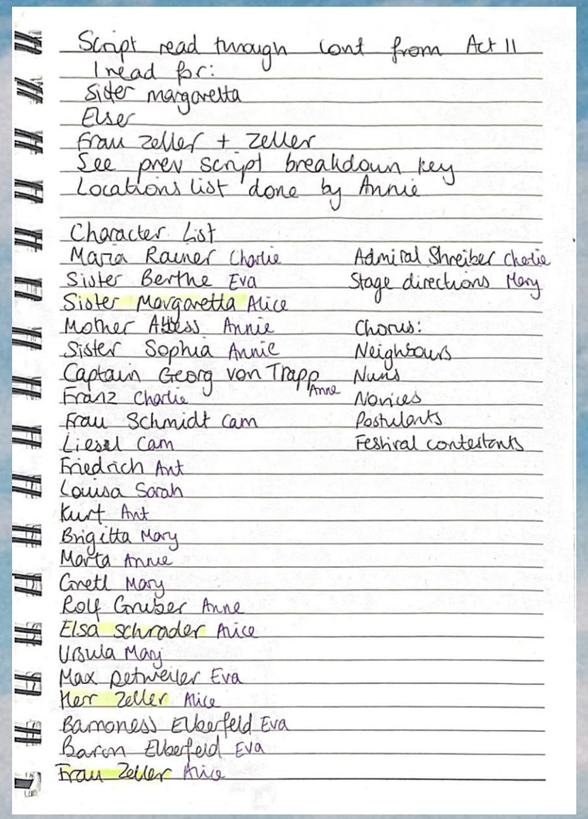


The Sound of Music - Script Breakdown

Music by Richard Rodgers, lyrics by Oscar Hammerstein II, Story by Howard Lindsay and Russel Crouse.
Based on the 1949 book 'The Story of the Trapp Family Singers' by Maria von Trapp

Highlighted breakdown key:
Set
Costume
Lighting
Sound
Prop

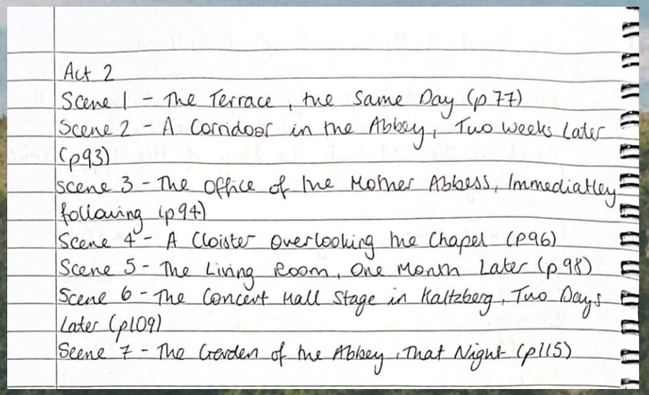
Set in Austria, early 1938
Act 1
Scene 1 - Nonnberg Abbey (p1)
Scene 2 - A Mountainside Near the Abbey (p4)
Scene 3 - The Office of the Mother Abbess, the Next Morning (p6)
Scene 4 - A corridoor in the Abbey (p17)
Scene 5 - The Living Room of the von Trapp Villa, that Afternoon (p18)
Scene 6 - Outside the Villa, That Evening (p32)
Scene 7 - Maria's Bedroom, Later That Evening (p36)
Scene 8 - A Hallway in the Villa (p45)
Scene 9 - The Terrace of the Villa, Six Weeks Later (p46)
Scene 10 - A Hallway in the Villa, one week Later (p60)
Scene 11 - The Living Room, the Same Evening (p62)
Scene 12 - A Corridoor in the Abbey (p71)
Scene 13 - The Office of the Mother Abbess, Three Days Later (p72)



Script read through cont from Act II
I read for:
Sister Margaretta
Elsa
Frau Zeller + Zeller
See prev script breakdown key
Locations list done by Annie

Character List

Maria Rainer Charlie	Admiral Schreiber Charlie
Sister Berthe Eva	Stage directions Mary
Sister Margaretta Alice	
Mother Abbess Annie	Chorus:
Sister Sophia Annie	Neighbours
Captain Georg von Trapp Anne	Nuns
Franz Charlie	Novices
Frau Schmidt Cam	Postulants
Liesel Cam	Festival contestants
Friedrich Ant	
Louisa Sarah	
Kurt Ant	
Brigitta Mary	
Marta Annie	
Gretl Mary	
Rolf Gruber Anne	
Elsa Schrader Alice	
Ursula Mary	
Max Detweiler Eva	
Herr Zeller Alice	
Baroness Elberfeld Eva	
Baron Elberfeld Eva	
Frau Zeller Alice	



Act 2
Scene 1 - The Terrace, the Same Day (p77)
Scene 2 - A Corridoor in the Abbey, Two weeks Later (p93)
Scene 3 - The Office of the Mother Abbess, Immediately following (p94)
Scene 4 - A Cloister Overlooking the Chapel (p96)
Scene 5 - The Living Room, One Month Later (p98)
Scene 6 - The Concert Hall Stage in Kaltzberg, Two Days Later (p109)
Scene 7 - The Garden of the Abbey, that Night (p115)

Analysis Questions

1. What is the Plot?

The Sound of Music follows a young, free-spirited postulant named Maria, who is sent to work for the von Trapp family after they are left without a governess. Maria is sent to the von Trapps' grand villa in Salzburg after missing curfew at her home and place of work, Nonnberg Abbey. The Mother Abbess believes Maria needs to experience life outside the convent before committing fully to becoming a Nun, as her charismatic and energetic personality may be better suited elsewhere. Although reluctant, Maria agrees to go. At first, Maria faces challenges from the reluctant von Trapp children and clashes with their father, Captain Georg von Trapp, due to her non-traditional values and unconventional approach to caring for the children. Over time, however, the family begin to warm to her, and despite the Captain being engaged, Maria finds herself falling in love with him. Overwhelmed by her feelings, she leaves the von Trapp Villa and returns to the Abbey.

Back at Nonnberg Abbey, Maria speaks to the Mother Abess who encourages her to follow her heart rather than run from her feelings. Maria returns to the von Trapp household to continue her role as governess until a replacement is found. The Captain, having realised his own feelings, proposes to Maria after he and Elsa Schraeder mutually end their engagement. Meanwhile, political tensions rise in Austria as the Anschluss takes place during Maria and the Captain's honeymoon. Captain von Trapp is ordered to join the Nazi Party as a Navy Captain for the Third Reich. Refusing to compromise his beliefs on democracy, Maria and Captain von Trapp decide to flee Austria with their family, escaping Nazi rule.

2. What is the Theme?

The key themes of the play are being true to yourself and taking pride in who you are, facing challenges with courage, and staying loyal to your beliefs. The Sound of Music also emphasises the importance of family and love, showing how unity and support can help people overcome difficult situations. Through Maria and the von Trapp family's journey, the play encourages audiences to follow their hearts and stand up for what they believe is right.

Analysis Questions

3. What is the Logic?
The story does make sense in a traditional sense and follows the three-act narrative structure of exposition, conflict and resolution. The story is also based on the true story of the von Trapp family, a real Austrian family who formed a famous singing group and escaped the Nazis, with their story documented in Maria von Trapp's memoir, 'The Story of the Trapp Family Singers' (1949).

4. What is the Exposition?
Our first introduction to the setting of the play is in Maria's home in Nonnberg Abbey, the Nuns are singing their prayer and as it comes to an end, the Nuns, Postulants and Novices realise Maria is missing from the service. Next, we are introduced to Maria on a mountainside in the Austrian countryside where she is laying beneath a tree. Here we see Maria's free-spirited nature, and she sings about her love for the mountains and her home. Back at the Abbey, the Mother Abbess, Sister Berthe, Sister Sophia and Sister Margaretta discuss the Postulants they believe are ready to progress to Novice, and they also consider the Postulants they are doubtful about. Maria's name comes up and the Sisters agree that due to her 'charming' yet 'wild' (Lindsay, H., Crouse, R. p 9) personality, Maria is not an asset to the Abbey.

5. What is the Complication?
The complication of the story is Maria being sent away from the Abbey to work as a Governess as a result of her 'unpostulant-like' nature (Lindsay, H., Crouse, R. p 4). She finds it difficult to fit in with the von Trapp family and their strict rules, encouraging the children to let loose and express themselves through song, much to the Captain's disproval.

Analysis Questions

6. what creates the Tension?
In the background of Maria's journey of self-discovery, a growing sense of political tension emerges as the Nazi Party rises to power and the threat of the Anschluss looms over Austria. The play reflects the deep divisions within Austrian society at the time. Some citizens strongly oppose Nazi ideology and resist its influence, choosing to stand against the regime despite the risks involved, much like the Captain and Baron Elberfeld. Others, however, respond with fear or uncertainty, remaining passive or compliant in order to protect themselves or maintain a sense of neutrality.

7. what is the Main Question?
The main question of the play is what will the Captain do, will he join the Nazi's, meaning his family can be safe and stay at their home in Austria, or will he stick to his beliefs and take his family away, putting them at risk.

8. what is the Main Action?
It could be interpreted that there are two climatic peaks within the narrative, one is Maria marrying the Captain and officially joining the von Trapp family. And another peak, and the one I believe to be the main action, is Act 2 scenes 6 and 7, toward the end of the script where the Captain, Maria and the von Trapp family flee Austria.

9. what is the Cause of the Action?
The cause of action occurs when Maria and the Captain return from their honeymoon. Herr Zeller and Von Schreiber visit the Villa to speak to the Captain and offer him a position to work for the Nazis as a Naval Captain. Despite their calm nature, Zeller and Von Shreiber aren't really asking but ordering the Captain to join the Third Reich. They ask him to start at once and the Captain begins to refuse the offer when Maria interrupts with a plan to buy the Captain more time.

Analysis Questions

10. what is the Resulting Action?
This results in Maria coming up with a quick solution to give them more time to make a getaway plan: to tell Herr Zeller and Von Shreiber that the Captain is performing in the Kaltzberg festival in a few days with the family and can't miss it. They allow him to put off his start day if he agrees to join them after the concert.

11. what is the Conclusion?
After the von Trapp family perform, they escape the *Guard of Honour* waiting to take the Captain away to his post at a Naval base in Bremerhaven. Max stalls for time when announcing the festival winners, allowing the von Trapp family to sneak away to Nonnberg Abbey where they hide from the SS, (short for 'Schutzstaffel' who were Nazi guards) who are hunting them down. Rolf, now an SS member himself finds the von Trapp family hidden in the Abbey's Garden, he doesn't give them away, allowing them to head for the mountains where they can cross the border to Switzerland by foot.

12. who is the Protagonist?
The protagonist is Maria. She is very likeable in her attitude toward facing adversity and in how she treats everyone with equal kindness and respect. She is also a relatable character, facing questions of life around where to spend love and how to decide what path to follow in life. I find her inspiring for how she sticks to her beliefs and in how she confronts challenges head-on.

13. who is the Antagonist?
In my interpretation, the main antagonist is Zeller. He applies a lot of pressure on the Captain and it is implied, to many families in Saltzburg to join the Third Reich. He is the key Nazi figure of the play, so he represents an evil entity and ideology which the Captain defies. As a contemporary audience, we have stronger opinions on the Nazis than perhaps the characters have at the time of the play (set just before WWII). We are well aware of the Nazi's intentions and the outcome of their rule. It is interesting to think about how reactions might have changed with hindsight, which I believe goes for Elsa, Max, Rolf and possibly even Zeller and Von Schreiber themselves.

Analysis Questions

This leads me to my next point, in which Elsa could be interpreted as an antagonist for her role in keeping the Captain and Maria apart, though I don't think this is the purpose of her role, nor that important to her as a character. It could be said in the film she is an antagonist, but I think in the script, the purpose of her and Max's characters are to show how at the time, a lot of the elite turned their back on their home and communities for their own self-interest or to buy their freedom or safety from the Nazi regime, a luxury a lot of victims of the Nazi's, couldn't afford.

14. who is the Most Interesting Character?
To me the most interesting character is Maria, she brings a new perspective to the von Trapp's life and home, breaking down expectations of her unapologetically and looking out for the children. When I first viewed the film as a child I found her unpredictable and a sign of change for the better by embracing challenges. Now after reading the script, I think for the time period she would have defied many people's expectations in her disregard for authority and conformity for which I find her inspiring.

15. where does the story Take Place?
In the script, it begins with 'Austria, early 1938' (Rodgers, R. , Hammerstein, O. prelude). The Anschluss occurs in March of this year. We know Maria becomes a Governess before this and is instructed to be the von Trapp's Governess until September. Salzburg is located in western Austria near the German border, in early 1938, Salzburg was a beautiful, historic city known for its music, baroque buildings, and strong Catholic traditions. The Nazis wanted control of Austria because it was a German-speaking country they believed should be part of a larger German nation, an idea central to Adolf Hitler's beliefs. As well as this, Austria was strategically important because of its location in Europe. In the months leading up to Germany's takeover of Austria in March 1938, Salzburg's peaceful appearance hid growing fear and conflict, as Nazi influence increased and opposing views became risky to express.

Character Analysis

From my script breakdown I made a note on character descriptions, including their key aims and characteristics. Delving into a character's motivations helps me think about what kind of story I am trying to portray through design. What the characters are thinking when they are in our set effects design choices like size, colour, light etc. When I come to sketching some initial designs, I will be thinking about how these principles help tell the story in my design.

Maria Rainer

- We first meet Maria in Scene Two on ‘a mountainside near the Abbey’ (Rodgers, R. , Hammerstein, O. p4) She lies beneath a tree in her Postulant uniform (Postulant means someone taking the first step toward becoming a nun. A postulant experiences life as a nun before being accepted into the novitiate). She is described as being sat in an ‘unpostulant-like’ position (Rodgers, R. , Hammerstein, O. p4). She sings about her love for the hills and enjoying the scenery and sounds of the mountains
- She grew up on the mountains of Austria and they brought her to Nonnberg Abbey. Growing up, she would watch the Nuns in their garden and listen to them sing on their way to Vespers (evening prayer).
- Maria is seen as *unfit to become a Novice*, due to her free-spirited nature. Sister Sophia, Sister Berthe and Sister Margaretta are asked by the Mother Abess of their opinion of her to which they sing ‘Maria’ and describe her as a ‘Flibbertigibbet’, a ‘will-o’-the-wisp’, a ‘clown’. (Rodgers, R. , Hammerstein, O. p8)
- Maria is sent away from Nonnberg Abbey to be a Governess of the von Trapp family in hopes if she gains more life experience, she will be better prepared to make the decision to commit to religious life.
- Maria doesn’t use the whistle to call the children that is given to her by the Captain and refuses to answer to a whistle herself. This shows that she believes in treating others and herself with respect and humility no matter their age or social rank.
- When Maria is left alone with the children for the first time, she admits she knows ‘nothing’ about being a governess (Rodgers, R. , Hammerstein, O. p25)
- Maria brings music and play time into the von Trapp home, making clothes for the children to get messy in and teaches them to sing.
- After her argument with the Captain about him knowing very little about his children and not being present enough, the Captain tells her to pack her things and return to the Abbey. He quickly changes his mind after hearing his children sing to Elsa, which almost drives him to tears.

Character Analysis

- We find out on page 74, that Maria's parents died when she was young. Her parents were 'very happy' together and this gave Maria a 'great capacity to love' (Rodgers, R. , Hammerstein, O. p74) as described by the Mother Abbess. Maria is unsure how to spend her love and first thinks it is best spent toward faith and serving her God. This could be because she lost her parents, she has a lot of love to give but nowhere to place it.
- The Mother Abbess assures Maria that the love between a 'man and a woman is holy too… what you must find out is – how does God want you to spend your love.' The Mother Abbess urges Maria to look for the answer by returning to the von Trapp's. This is one of the key messages of the play: to not run away from problems but to face them, this lesson is later passed onto Liesl by Maria.
- By the time Maria gets back to the Villa, she is too late to confess her feelings for the Captain as he is engaged to Elsa.
- After Elsa informs Maria that the engagement is off, the Captain takes this opportunity to tell Maria his true feelings, he promises to take her 'anywhere she wants to go' (Rodgers, R. , Hammerstein, O. p90) and give her anything she wishes. Maria responds to this with 'I don't want to go anywhere. All I could wish for is right here.' (Rodgers, R. , Hammerstein, O. p90). She wishes to dedicate her life to the Captain and his family and that means standing by him no matter what.
- After her and the Captains wedding ceremony and their honeymoon, Maria and the Captain return to the villa to find that tensions have increased within Austria, the Nazi party are applying pressure on the Captain to join the Navy of the Third Reich. Nazism has also entered their home, with the butler Franz now saluting Rolf when he comes to drop off a Telegram. Rolf uses this opportunity to warn Maria and Liesl very sternly of the risky implications they will face if the Captain doesn't join 'the right side' (Rodgers, R. , Hammerstein, O. p104) pun intended?
- The Captain asks for Maria's opinion on what the family must do, to which she responds 'Georg, whatever you decide will be my decision.' (Rodgers, R. , Hammerstein, O. p105) Showing her loyalty to the Captain and the von Trapp children.
- Maria cleverly comes up with the plan of performing in the Kaltzburg Festival to buy the Captain more time from his conscription. It is after their performance they leave Austria for Switzerland. She is supporting the Captains decision in this, who shows his morals are too strong to be swayed by a promise of safety, like Max and Elsa.

Character Analysis

- Maria is described as ‘beautiful’ (Rodgers, R. , Hammerstein, O. p94) by the Mother Abbess after seeing her dressed for her wedding. As part of their religious order, Nuns can’t be vain and admire themselves as it is seen as sinful, despite this the Mother Abbess allows Maria to see herself in a mirror.
- In her relationship with the Captain, she refuses to try to change his mind on appeasing the Third Reich. Unlike Elsa, she believes she cannot ‘ask Georg to be less than what he is.’ (Rodgers, R. , Hammerstein, O. p102)

Captain Georg von Trapp

- The Mother Abess describes Captain von Trapp to Maria as a ‘fine man – and a brave one. He was given the Maria Teresa medal by the emperor… for heroism in the Adriatic.’ (Rodgers, R. , Hammerstein, O. p15). This refers to The Adriatic Campaign of World War I which was a naval conflict fought in the Adriatic Sea between the Central Powers, most notably Austria-Hungary, whose navy played a leading role in the region. Korvettenkapitän Georg Ludwig von Trapp, father of the von Trapp family that inspired the play, was awarded the Maria Teresa medal for sinking 13 ships as a submarine commander during the First World War.
- Uses a silver boatswain whistle to summon his children and staff.
- Ever since the death of his wife, who used to host parties and sing and play the violin and guitar, he has banned music in his home.
- He is rarely home which Frau Schmidt believes is because his children remind him too much of his late wife.
- When Elsa asks him to host a dinner party so she can meet his friends, he responds that ‘today it’s difficult to tell who’s a friend and who’s an enemy.’ (Rodgers, R. , Hammerstein, O. p49). Here he is speaking about those of whom he used to share social circles with, who are now supporting or sympathising with the Third Reich.
- Later, when Rolf comes to the Villa, looking for Liesl, the Captain sees him first. Rolf makes an excuse for himself by delivering a telegram to Max, he salutes and *Heils* the captain. The Captain responds with ‘I am an Austrian - I will not he heiled!’ (Rodgers, R. , Hammerstein, O. p53) Making his political position clear, that he firmly rejects the Nazi party’s annexing of Austria.
- The Captain cares about his family's appearance, horrified at the thought of them around Saltzburg in clothes made from curtains.

Character Analysis

- Maria and the Captain sing “The Sound of Music” once the children take Elsa to the gardens to show her around. The Captain disposes of his whistle and returns Louisa’s curtain material handkerchief back to Maria. This is Maria's influence which brings him to allowing music back into the villa.
- When Maria leaves without saying goodbye, after realising her feelings for the Captain, he is left heartbroken. He shows it in anger, which could be at himself for falling for her. When the children ask for her back to help them with their singing, the Captain remarks ‘We do not need Fraulein Maria. You can sing just as well with me.’ (Rodgers, R. , Hammerstein, O. p79)
- When Maria returns to the Villa, the Captain says ‘You’ve been missed by the children, I’ve missed – everybody missed you very much. Nothing was the same.’ (Rodgers, R. , Hammerstein, O. p80)
- Maria congratulates Elsa and the Captain on their engagement, and they inform her they have ended their engagement. After Elsa leaves, Maria and the Captain confess their feelings for each other.
- As the Nazi regime grows in strength, the Captain must make a decision whether to join them or flee. He could take the simpler route and have the opportunity to work again as a Naval officer which he admits would be ‘exciting’ (Rodgers, R. , Hammerstein, O. p95) and this way, he would be able to guarantee safety for his family from the Nazis. Despite these attractive opportunities, the Captain ultimately decides him and the family must leave and as soon as possible. Before him and Maria are able to make a plan, Admiral Von Shreiber of the Navy of the Third Reich along with Herr Zeller come to pay the Captain a visit.
- With Maria, they lie to them. They tell them they plan to sing in the Kaltzburg Festival with the children. After the performance, they go to Nonnberg Abbey to hide. The Captain had planned to drive out of Austria, but the border is now monitored by the SS. Instead, they all leave to walk over the mountains and into Switzerland by foot.

Character Analysis

The von Trapp Children

- ‘Each morning is spent in the classroom. Each afternoon, they march. You will see that at all times they conduct themselves with decorum and orderliness. The first rule of this house is discipline’. (Rodgers, R. , Hammerstein, O. p21) Captain von Trapp to Maria.
- When we first meet them upon Maria’s arrival, they are dressed in white sailors uniforms
- Before meeting Maria, the children don’t know any songs, she teaches them to sing with the song Do-Re-Mi.
- ‘The von Trapp children never play’ Frau Shmidt (Rodgers, R. , Hammerstein, O. p36-37) in response to Maria asking for material to make play clothes for the children. ‘The Captain doesn’t like them to get dirty… The Captain says the best exercise is marching. The children will continue to march.’

Liesl, 16 years old

- She believes she is too old to need a governess, later, she takes back this statement when Maria offers to help her clean her dress after caching her sneaking in past curfew.
- When confronting the Captain about his militant approach to parenting, Maria describes Lisel as not ‘a child anymore. And if you keep treating her as one, Captain, then you’re going to have a mutiny on your hands.’ (Rodgers, R. , Hammerstein, O. p55)
- Liesl is brought to tears when Rolf visits to drop off a Telegram. He makes a threatening remark, warning Maria and Liesl they must leave the country if the Captain refuses to join the Third Reich. She doesn’t understand Rolfs sudden cold feelings toward her and her family and sees this as him turning on them.

Friedrich, 14 years old

- In the same scene of the second bullet point in Liesl’s descriptions, Friedrich is described by Maria as ‘afraid of himself- he’s shy – he’s aloof, Friedrich needs you (the captain) he needs your confidence –’ (Rodgers, R. , Hammerstein, O. p55)

Character Analysis

Louisa, 13 years old
- With the other children, has played tricks on the previous Governess's like putting Toads in their bed.
- Described by Maria as someone who 'wants to have a good time. You've got to let her have a good time.' (Rodgers, R. , Hammerstein, O. p55)

Kurt, 10 years old
- Described by Maria as 'sensitive – he's easily hurt – and you (the Captain) ignore him – you brush him aside the way you do all of them (the children).' (Rodgers, R. , Hammerstein, O. p55)

Brigitta, 9 years old
- Described by Maria in the captain and hers argument as someone who 'could tell you a lot if you got to know her, because she notices things. And she always tells the truth – especially when you don't want to hear it.' (Rodgers, R. , Hammerstein, O. p55)
- She makes Maria aware of her feelings toward the Captain and that he reciprocates them. 'After we finished (singing), you laughed at him for forgetting the words. He didn't forget the words. He just stopped singing to look at you. And when he speaks to you, the way his voice sounds… And the way you looked at him just now when you were dancing. You're in love with him.' (Rodgers, R. , Hammerstein, O. p67)

Marta, 7 years old
- Maria doesn't know her well she admits, during her disagreement with the Captain but wants to get to know her, exclaiming 'someone has to find out about her.' (Rodgers, R. , Hammerstein, O. p55)

Gretl, the youngest
- At the end of her rant, Maria drives the point home with young Gretl, explaining that she 'just wants to be loved.' (Rodgers, R. , Hammerstein, O. p55) Maria pleads with the Captain to 'love all of them.' and they need the Captain, their farther to be in their life.

Character Analysis

Mother Abbess
- Sends Maria away for a while to become a Governess for the von Trapp family.
- Like Maria, she was also brought up on the mountains, she knew the song ‘My favourite things’ and sings it with Maria in the Mother Abbess’ office.
- Believes Maria is not prepared for the way Nuns live despite having watched them growing up.

Sister Margaretta
- Mistress of Postulants (Rodgers, R. , Hammerstein, O. p7)
- Maria recounts that Sister Margaretta is often reminding Maria of the no singing rule in the Abbey.
- She says a word on Marias behalf in the song: Maria, that she makes her laugh. (Rodgers, R. , Hammerstein, O. p8)

Sister Berthe
- Mistress of Novices (Rodgers, R. , Hammerstein, O. p7)
- Of the other nuns, she is most opposed to Maria's promotion to Novice.

Sister Sophia
- Holds the keys to the Abbey and opened the gate to Maria when she was late home.
- Sister Berthe and Sister Margaretta do not see eye to eye on Maria’s future at the Abbey, the Mother Abess asks Sister Sophia for her input. She responds that she ‘love(s) her very dearly’ but also that she ‘always seems to be in trouble.’ (Rodgers, R. , Hammerstein, O. p7)

Character Analysis

Frau Shmidt
- Housekeeper for the von Trapp family
- Described by von Trapp as his ‘executive officer’ in naval terms.
- Finds being whistled for humiliating, now that the Captain’s wife is dead, he runs his home like a ship.
- In scene 11, in a hallway in the villa, Frau Shmidt helps Marta with her bow. With the children, she talks about the parties they had a long time ago that Liesl, Friedrich and Louisa can remember.

Franz
- The Butler for the von Trapp family
- A middle aged man who was the ‘Captain’s orderly in the Imperial Navy’ (Rodgers, R. , Hammerstein, O. p19) This is an assistant to the captain who carries out minor tasks.
- Wears a working apron
- Butlers at this time would have been responsible for laying the table, serving the meal and directing other staff, as well as cleaning the silver, glass and fine China.

Rolf Gruber, a 17 year old telegram delivery boy
- Described by Frau Shmidt as a ‘scatterbrained boy’ (Rodgers, R. , Hammerstein, O. p20)
- Has ‘a way of knowing things’ (Rodgers, R. , Hammerstein, O. p32) Suggests he is well in tune to what is happening in Austria in terms of Germany’s growing presence. He also keeps track of patterns of deliveries, like Franz’ birthday telegram from his sister.
- He worries for Liesl as he is aware of the Captains opposing stance to the Nazi party and that could mean trouble for him and the family. He also knows secrets like the Colonel Shneider (A German naval officer) is in Salzburg.

Character Analysis

Elsa Shrader

- ‘A handsome woman in her late thirties, cosmopolitan, alert and attractive.’ (Rodgers, R. , Hammerstein, O. p46). The description of her being ‘handsome’ then ‘attractive’ rather than being described as beautiful, implies she is of a high social status and is perhaps used in contrast to Maria who is associated with warmth and youthful energy.
- Our first introduction to Elsa Shrader is on the Terrace of the Villa (page 46) where she sits at the table, admiring the view (facing toward the back of the audience) whilst Captain von Trapp admires her.
- She is a widower and is now the president of a corporation that belonged to her late husband: an estate in Vienna. His name was Heinrich, we don’t know how he died but it may have been a terminal illness, since Elsa took over years before his death.
- Elsa takes pity on Rolf when the Captain tells him to ‘get out!’. (Rodgers, R. , Hammerstein, O. p53). Coming to his defence telling the Captain he’s ‘just a boy’ (Rodgers, R. , Hammerstein, O. p53). This could be because she doesn’t feel as strongly about Nazism as the Captain does, but also it could mean she has a sensitive side.
- ‘I know, that makes me furious. I don’t like to win without a fight.’ (Rodgers, R. , Hammerstein, O. p84) When debating with Max about the size of the Captain’s grounds.
- Elsa makes her political position clear to the Captain when she agrees with Max about keeping friends with the opposition to protect yourself. Max selfishly thinks of himself if the Captain were to defy them. Max tries to squash the debate by saying ‘one thing is sure- nothing you can do will make any difference’ (Rodgers, R. , Hammerstein, O. p85) and Elsa tells the Captain to relax. This shows how people in wealthier situations could look after themselves by being complacent, yet the Captains morals are too strong to ignore the situation.
- Max and Elsa sing another number with the Captain about putting yourself first called “No Way to Stop It” (Rodgers, R. , Hammerstein, O. p5). Afterward it is clear that Elsa and the Captain can not see eye to eye. They decide to break off their engagement, and she goes to pack her things for Vienna.
- To her credit, she goes willingly, returning her engagement ring to the Captain and bids the Captain and Maria goodbye.

Character Analysis

Max Detweiler

- ‘Charming and vital’ (Rodgers, R. , Hammerstein, O. p48)
- In charge of curating the Kaltzberg Festival – a concert that displays local and undiscovered musical talent.
- Of course I like you. Why shouldn’t I like you? You live like a king. You have an excellent wine cellar… I like rich people. I like the way they live. I like the way *I* live when I’m with them.’ (Rodgers, R. , Hammerstein, O. p49). He is honest in how he enjoys material things but has a sense of humour about it and isn’t afraid to admit it.
- Unlike the Captain, Max and Elsa are complicit in the Nazi Party’s imperialism, like many Austrians at the time, they are not anti-Nazi. Max says to the Captain: ‘Georg, why don’t you look at things the way I do? What’s going to happen is going to happen. Just be sure it doesn’t happen to you.’ (Rodgers, R. , Hammerstein, O. p53)
- In musical number 16 “How Can Love Survive?” (Rodgers, R. , Hammerstein, O. p50)
- Max and Elsa sing about how wealth takes away romance, and their marriage is more of a strategical move than one of passion.
- Max encourages the children to practice for the Saltzburg festival, without their or the Captain’s knowledge that he plans to have them perform.
- Throughout the script, Max is receiving phone calls from Berlin. The Captain challenged this on him to which Max replies ‘Georg, you know I have no political convictions… [If the Nazi’s invade Austria] I want to have some friends among them.’ (Rodgers, R. , Hammerstein, O. p84

Character Analysis

Herr Zeller
- We first come across Herr Zeller and his wife at the Captains dinner party. He is speaking with Baron Elberfeld, as mentioned earlier by the Captain as a family who have lived in Salzburg for a very long time. Like the Captain, Elberfeld shares similar sentiments about the Nazi party and they have a disagreement. He warns Elberfeld that 'there's going to be an Anschluss, I warn you and everyone like you – and that goes for our –' (Rodgers, R. , Hammerstein, O. p62). He was most likely going to refer to the Captain but he is hushed by his wife.
- Herr Zeller is aware of the Captains opinions of the Nazi party, and is suspicious of his excuse of singing at the Kaltzberg Festival. Because of this he asks him to prove it by singing with the family.

Von Shreiber
- And Admiral of the Third Reich, with Zeller he pays the Captain a visit after not hearing a response to their offer to him to join the Nazi's Navy.
- He agrees to allow the Captain to begin work with the Navy by the Monday after the Kaltzberg Festival, much to Zellers protest.

Ursula
- A maid for the von Trapp household, first appears page 46, delivering pastries to Elsa and Captain von Trapp on the Terrace.

New Postulant
- Joins Sister Sophia in scene 12, entering the Abey as a new comer in her own clothes.
- Next, she appears in scene 13 signing her name in the Mother Abbess' Office.

Baron Elberfeld
- 'The oldest family in the valley.' (Rodgers, R. , Hammerstein, O. p49)
- In a 'spirited' argument with Herr Zeller, Elberfeld describes himself as 'not a German. I am Austrian.' Zeller warns him of the Anschluss.

Location Breakdown

Office of the Mother Abbess (from the description on page 6):
- Sparsely furnished to indicate ‘monastic austerity’ (Rodgers, R. , Hammerstein, O. p6)
- A desk in the centre with an armchair on one side and a stool on the other
- A prie-dieu (a prayer stool or desk used for private worship)
- A door on either side of the room
- On the desk: an inkstand and pen and some papers (containing a list of twenty-eight postulants they are considering for Novice status)

The Chapel of the Abbey
- The chapel is domed, the audience see the wedding procession through a Cloister (a covered often arched walkway)
- The nuns watch on through a metal grille (decorative see-through partition)

Von Trapp Villa

The Living Room (from the description on page 18):
- Beautiful, large room
- Two stories high, baroque in style, handsomely furnished
- Downstage left - a door to the dining room, above this two large French windows that open to a terrace
- A porcelain stove (aceramic stone heater) between the two French windows
- Downstage right - a door to the Captain’s library, upstage of this door, a circular stairway curves to the second-floor landing, forming a small balcony over the living room.
- On the left of the balcony are the first few steps of the curved staircase to the third floor
- On the ground floor, upstage under the balcony, are double doors opening on the hallway, which leads to the outer door of the house, off right.
- Also on the ground floor, in the curve of the staircase are a small table and side chair with a sofa and singular chair on stage left

Location Breakdown

Outside the Villa (from the description on page 32)
- The villa and the wall that runs around it
- Down left centre is a stone bench
- Outside the villa is where Liesl and Rolf meet and sing no.11 ‘Sixteen Going on Seventeen’ Rodgers, R. , Hammerstein, O. p33)

Maria’s Bedroom (from the description on page 36):
- Top floor of the Villa with a gabbled ceiling (meaning the roof is slanted and joins at a point, which is what tells the audience she is on the top floor)
- Door from the hallway is in upstage wall, to the left of the doorway is wardrobe with double doors.
- The left wall slants away from this and in it is a window
- To the right of the door is to the hall is an alcove, curtained off with drapes of yellow and brown cretonne (a heavy, floral printed fabric) which match the drapes of the window
- Below the alcove in a jog, (wall jogs are used to break up straight lines and add stability to walls in an ‘L’ shape) is Maria’s double brass bed with a thick comforter.

Scene 8, ‘A Hallway in the Villa’ (Rodgers, R. , Hammerstein, O. p45) lit by candles held by the girls

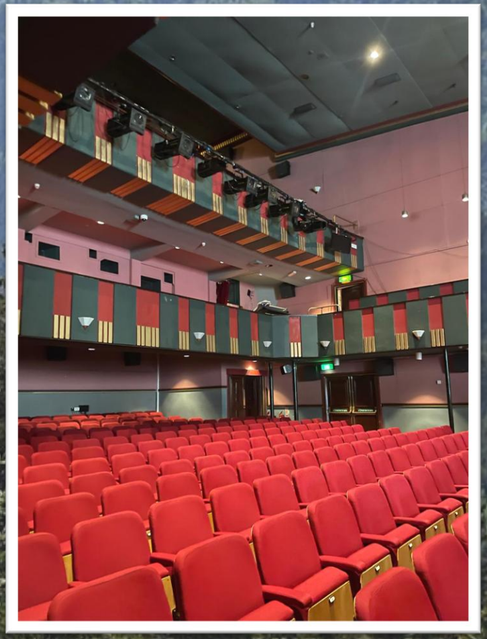
The Terrace of the Villa (from the description on page 46):
- The Villa is stage right. Since the terrace is off the living room, people entering from the house come through the French windows
- Over the windows is a striped awning . Convenient to these windows are a terrace table and two chairs, on the table is a tray with coffee
- On the upstage end of the house: a balustrade starts toward stage left, a potted plant on its terminal post.
- There is an exit toward the gardens on stage left between this balustrade and a boxwood hedge on the left side of the terrace
- In front of the hedge is a garden bench and a stool. Beyond the villa is a backdrop of the Alps

Site Visit

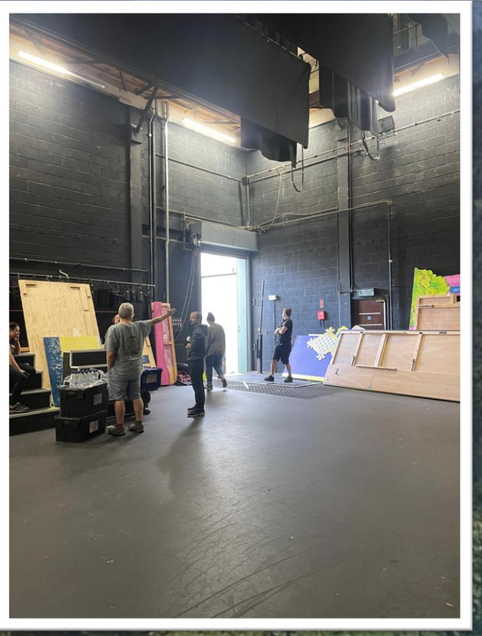
Visiting the Lyric Theatre

On the 24th November, we visited the Lyric Theatre in Carmarthen to tour the backstage area and get a sense of the scale our set pieces need to be. Here are some notes and pictures I took on our site visit.

- The stage is relatively high off the ground – your view is restricted if you sit in the first few rows. There are 665 seats in total in the theatre split into three levels – Stalls, Mezzanine and Circle.
- The Stage is raked at 1.70: For every 70 cm you travel upstage, the floor rises by 1 cm. The Forestage will be down for the orchestra pit
- We helped with the Get In for the upcoming Snow White pantomime. This had me thinking about how we could make things lighter – some of the flats that had been rented were double clad with plywood, making them difficult to grip, and added unnecessary weight.
- We will need to think about storage, the stage left wings are especially narrow, and also where the set will enter the theatre as this is where the loading dock is
- There will be 6 stage crew either side of the stage during the show run
- There are 68 in the cast, most of which are under 18. If we would like to work on the production, we will need to complete a DBS check which Mike can organise.
- There are around 70 volunteers in total working with the Carmarthen Youth Opera on this production, specifically 15 are in wardrobe, 10-15 in Front of House, 2 follow spots and 2 on the flight tower.



View of the Lyric's auditorium seating



The loading dock on stage left

Site Visit

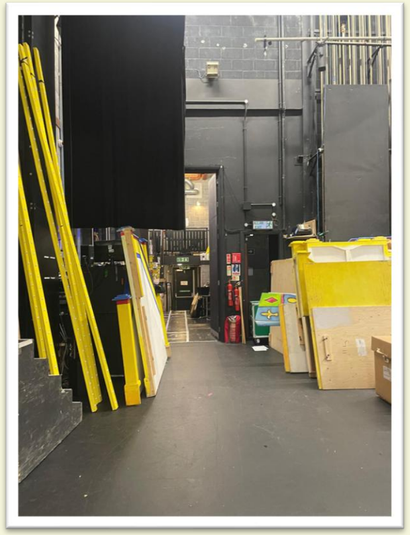
- There is a workshop stage right which can be used as further storage to the wings, but this is still limited
- Upstairs from this is the rehearsal room and downstairs is the Costume Store
- It is important to remember to always ask to cross the stage and for permission first if you want to move anything or go somewhere where is limited access like the Flight Tower.
- The Dimmer room – it's in the name, this is where the house's racks of dimmers are kept that are responsible for powering and controlling the lighting rig.
- The operating room is where the scenery is flown from
- 2 weights (10kg) is one 'bar' this is what holds the lights. You must never lean over a bar
- The lever with the black ball on the end is the break
- The dead (end of the rope) is marked with electrical tape
- There are 2-3 flyers for each show at the Lyric – for some productions like the Phantom of the Opera, they used 17 people to fly the Chandelier, now it is automated
- When you are up the fly tower, everything must be secured to you – dropping anything is very dangerous, especially from the grid floor.
- The room names from top to bottom of the Fly Tower: Grid Floor, Load (store cupboard), Operating Gallery (where the fly's are operated), Dimmer Room, below this is at stage level.
- If you go below stage level, you are at the level of the orchestra pit and auditorium

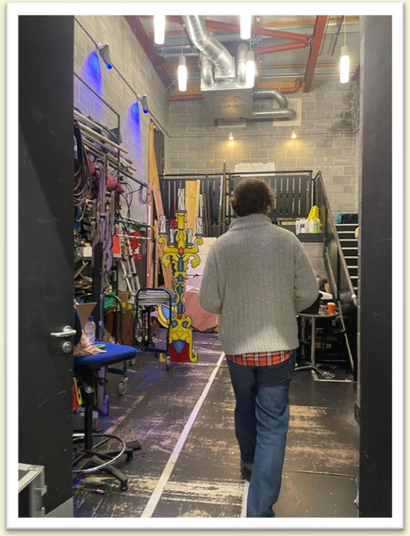


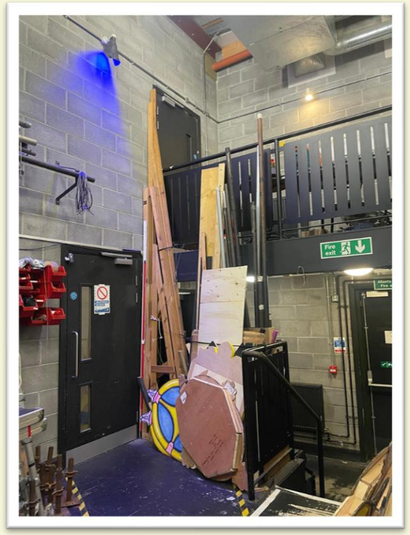


Pictures I took in the Operating Room, here you can see the fly system and a Lighting Bar.

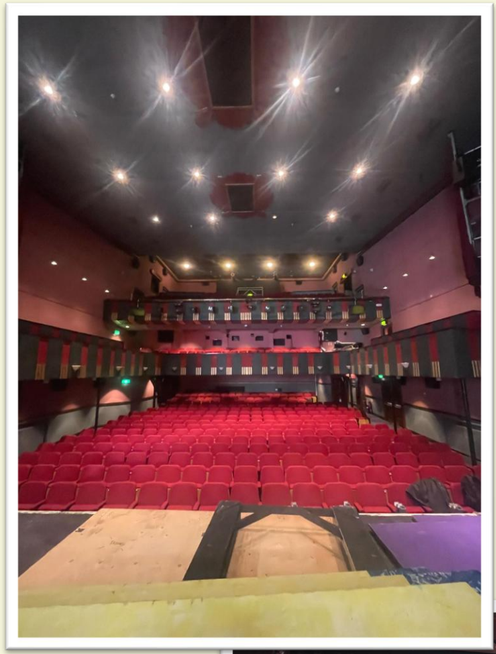
Site Visit







A view from the stage walking into the workshop on stage right. From the Workshop, the stairs that lead downward go to the Costume Store and Changing rooms and the stairs that lead up, go to a rehearsal room

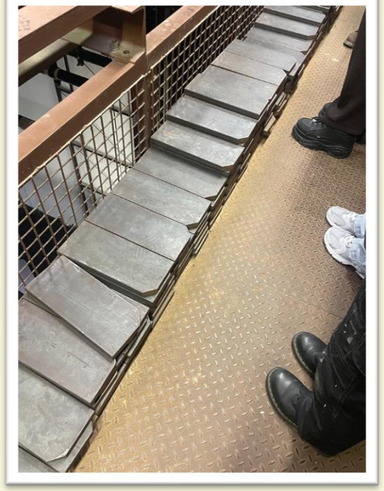


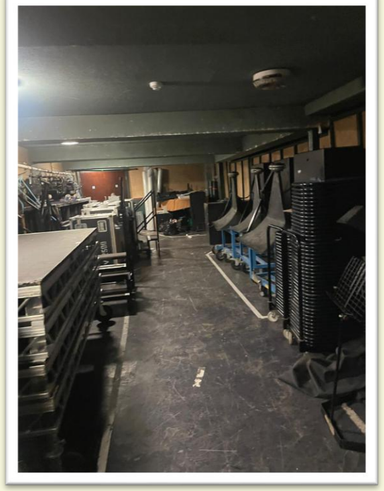
A view of the auditorium from the stage

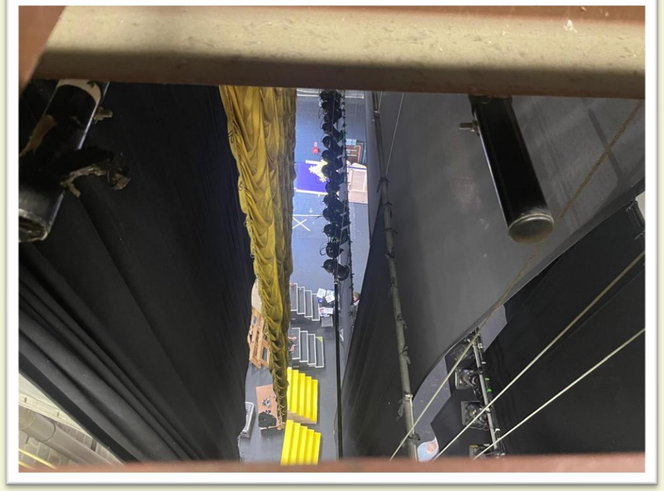


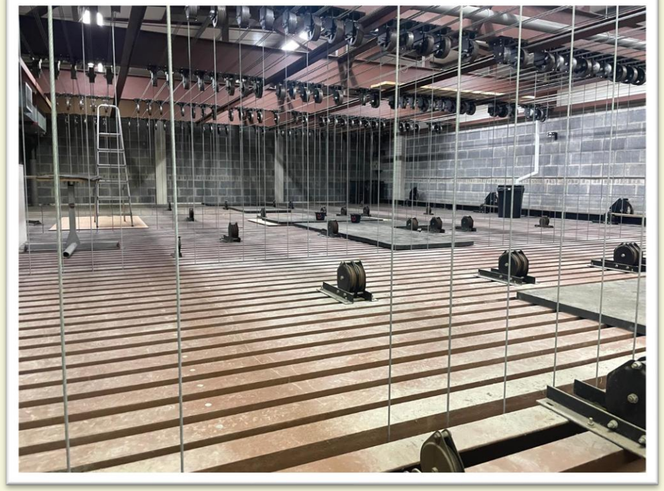
A view from the stalls of the stage and loading door

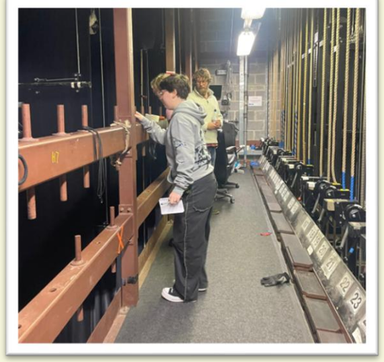
Site Visit











Top left is an image of the bar weights, then an image I took below the stage.

Bottom left is an image of the Operating Room from the entrance door

This is the Grid floor, the top floor of the Fly Tower. This consists of a metal structure high above the stage which is used to suspend and operate scenery, lighting or sound equipment from. It is a platform that technicians can use to manage the rigging systems. When working on the Grid Floor it is especially important to keep all items secured to your body so nothing drops onto the stage. The second image is a view from the stage from this level.

Production Meeting

On the 8th of December, Production Manager Mike Rogers and Chair of the Carmarthen Youth Opera, Wyn Davies visited us to talk over some design requirements.

They would like us to make:

Gazebo
- Can be 2-3 parts, that can come from stage left and right
- Needs benches for “Sixteen Going On Seventeen” where Liesl and Rolf dance in the Gazebo and use the benches – they need to be secure, so they don’t move when they are danced on.
- The cast feeling safe is crucial to them being able to put on their best performance.
- In Act 2 scene 1, the Gazebo will be assembled around Maria and the Captain during their song “An Ordinary Couple.”

Trees
- 6 Tress are needed, these are to be held by performers during a dance
- They can’t be taller than 6 foot
- Since we will be able to see the whole tree, we need to think about how we will present them – with branches and leaves? As just trunks?

Bridge
- To be used in Act 1 between scenes 4 and 5.
- There will be a maximum of 2 people on it at once
- Can be made from wood then decorated with Polycarving or Vac Form

Flag/Banners
- If possible, the CYO would like us to produce Nazi banners for Act 2 scene 6, which is the concert hall stage at the Kaltzberg Festival.
- Mike would like two banners hung from the house tabs (the large decorative curtains that hang just inside the Proscenium arch) . And one larger banner in the centre. He wants this one larger in width and length to serve as a backdrop to the concert stage.
- Mike needs to find out if they want a banner or flag that can be ripped by the Captain.
- We will need to have a discussion as a group about how we feel about making Swastika banners, as well as check with the University that they are okay with us making them under the University’s name.
- Personally, I think it is okay for us to be making the banners exactly as they would have looked – we are not glorifying the Nazi movement and the story of the play isn’t for it but critiquing it.
- Our alternative would be not having them which would be confusing to the audience on the setting of the Kaltzburg festival.

Production Meeting

- Or we make an alternative design, but I find this to be inappropriate, as we'd be making a fictional hate symbol that disguises the Swastika. We can make sure to handle this process with compassion, by doing our research on its significance and not sharing any images of the process online.

Other notes:

- Scene changes must happen within 10-15 seconds of black-out and the set pieces need to be simple enough to be put together swiftly.
- The biggest challenge logistically is making sure our set pieces fit in the small wings
- The age of the cast ranges between 8 to 25, there is about 65 cast members and 60 crew members across Wardrobe, Makeup, Flies which consists of the Carmarthen Youth Opera volunteers and in house staff at the Lyric Theatre
- Get in is on the 10th and the Set pieces are due on the 11th. The first show is Wednesday 18th February, then there will be 2 shows on the Thursday 19th, a show on Friday 20th and 2 shows Saturday 21st.
- Mike will be sending over visual references for the scenery and set they have rented from Proscenium and references for the pieces he wants us to design.
- There are many options for what we make the Gazebo out of.
- Mike is thinking of the structure used in Strictly Come Dancing which is heavily inspired by the film's design – white wooden structure with glass panels.
- We also have the option of Metal Arc Welding, which we have the equipment for and can try out in the workshop. Metal is a very strong material so could be a good option
- We need to consider how the Gazebo's benches can be a solid structure which will help it to be sturdy - in the film the benches have thin legs and in Strictly Come Dancing they get around this by putting the bench legs on a base. We could make our benches like this, or with a design that makes them solid like a Roman inspired solid leg that runs the length of the bench.
- The bridge is intended to go over a brook, and has a small hump formed from a stone wall, It will be roughly 12ft x 2ft
- The stone wall can act as a railing – will need to check regulations for how tall this needs to be
- It is not neat like a well looked after garden bridge, can be mossy and aged.
- It should be constructed with wheels so it can be moved on and off stage easily.
- The banners will need chains at the bottom of them so they hang straight.
- For a banner or flag that can ripped this could be down with Velcro (easily reset and makes a good sound)
- We will organise the transport of the set for the get in
- On the 16th Jan there is a technical meeting where we may get more information about storage available to us in the wings
- The director is Rhian Holdsworth – a new director for the company this year.

Schedule and Group Allocation

Next, we decided on how to divvy up the work-load. We have the option of having job roles or working as a team throughout the process. It would be a good idea to spilt into two groups for the larger projects: the Gazebo and Bridge. But we will support each other throughout where necessary – especially the scenic art stage of the process which is time consuming and will benefit from multiple hands working at once. We also need to make sure to keep communication fluid, it would be great if our designs could be cohesive, so they look like they belong to the same world. It is harder for us to match the set pieces to the scenery by Proscenium as we are not working up close with it and only have images of it, but it would be great to see it in person, if possible, but we may only see it at the get in.

What skills I want to work on

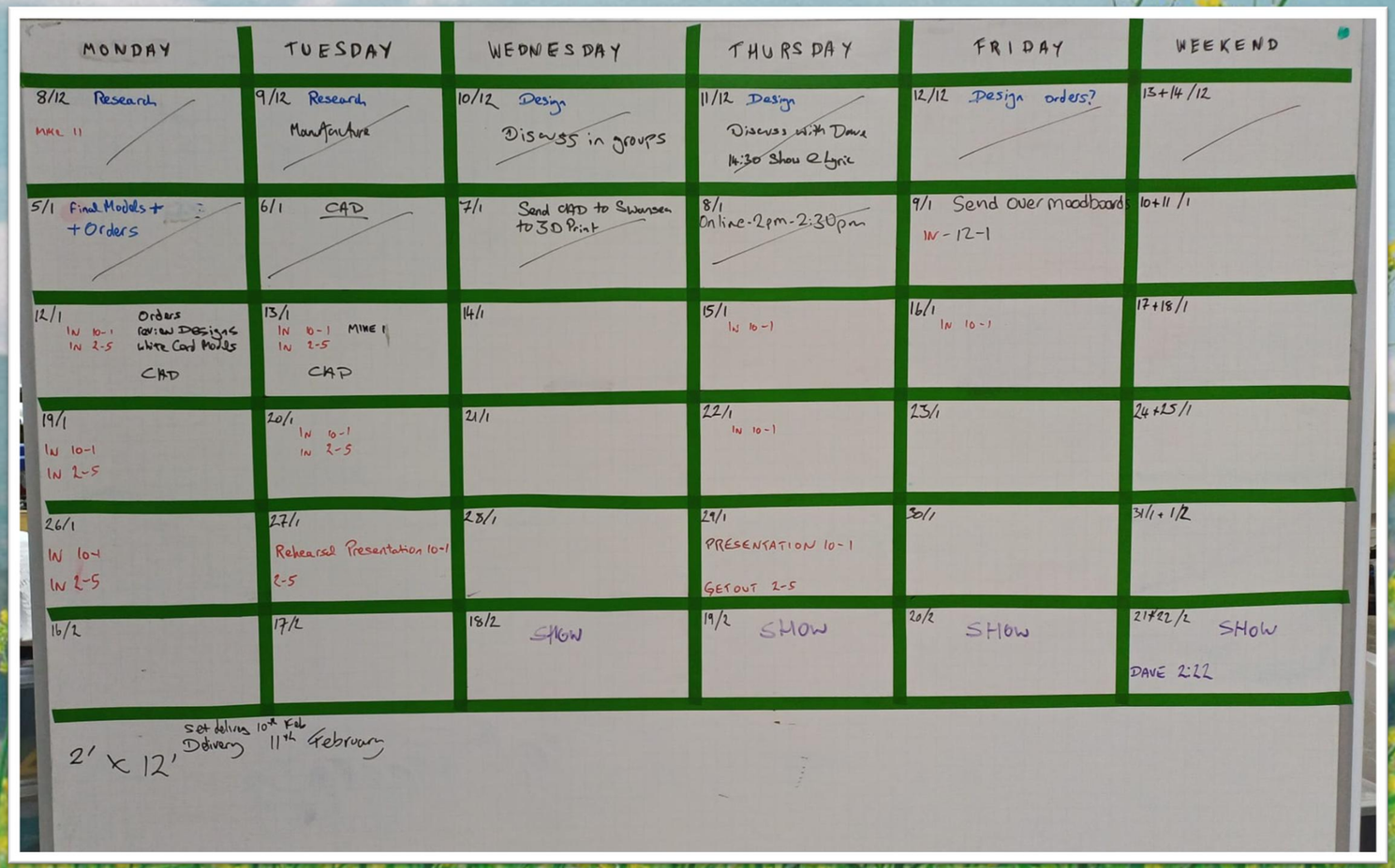
In this module, I would really like to begin working with Fusion to build a 3D model of a design. I have found that in the modelling process, I like working digitally but I feel limited by the technical approach of AutoCAD. Whilst CAD is invaluable for the building stage through making clear technical drawings, you can't make a complete, interactive model (or maybe you can and this is something I need to investigate). I am also looking to go over my construction skills, in the last module, when constructing our Expressionist set, we forgot simple stages like squaring off the ends of the softwood and remembering to use the correct direction of wood grain to ensure as much structural integrity as possible. It would also be good, if we get the time, to make a to-scale prototype. This isn't something we did in the last module and had we done this for the table we constructed, we would have been able to problem solve some later issues like its height being not as disproportionate as we had designed.

What I am working on and why

I chose to work on the Gazebo, it is something that I could see myself enjoying working on and I was already thinking of potential solutions to the brief brought up by Mike. I also love the song 'Sixteen Going on Seventeen' (despite now finding it a little creepier as an adult) so I *hopefully* won't get sick of thinking of the scene, I'll let you know in my evaluation how that went… It is also already used in the film, giving me a clear direction for research and inspiration. As a class, we decided between team Gazebo or Bridge then thought we could all work on the other required pieces: the Banners and Trees. We ended up with a pretty even spilt for the major pieces, I am working on the Gazebo with Cam, Sarah, Alaya and Ant. Annie, Anne, Mary and Charlie are working on the Bridge.

Schedule and Group Allocation

This is our initial schedule, commencing the week beginning of the 8th of December, before the holidays. At this stage we are focussing on research and carrying out early design processes like mood boards and sketches



Research

The Carmarthen Youth Opera

The Carmarthen Youth opera was founded in 1979 at Carmarthen's Further Education Centre by a small group of committed volunteers, led by the late Elizabeth Evans MBE and her husband David, with the aim of giving young people opportunities to develop and showcase their talents. The CYO's first production of Snow White (1979) won the Lord Snowdon Award, presented by the 'All Wales National Federation of Youth Clubs Entertainment.' From here, the organisation grew rapidly in ambition and scale, evolving through several name changes before becoming the Carmarthen and District Youth Opera in 1989, and gaining charitable status. Its growing success included acclaimed performances across the UK, appearances at major festivals and iconic venues such as St David's Cathedral, the London Palladium, and Buxton Festival, and prestigious accolades including Royal Patronage from The Duchess of Cornwall.

A defining achievement of the Carmarthen Youth Opera was the refurbishment and transformation of the Lyric Cinema into today's Carmarthen Lyric Theatre, a legacy of volunteer and public support. Over four decades, CYO has earned numerous awards, performed for royalty, and built a national reputation for high-quality productions, while remaining true to its core goal of providing opportunity and lifelong learning for young people, supported by a dedicated team of volunteers, professionals, and loyal supporters.



Elizabeth Evans M.B.E. (Carmarthen and District Youth Opera, 2025)



Snow White 1979 (Carmarthen and District Youth Opera, 2025)

Research

The Carmarthen Youth Opera
The Team
For this project, we are creating our set pieces for the CYO's yearly production, this year for The Sound of Music, Rhian Holsworth has joined the company as their new director. Her experience lies in Musical Theatre as a teacher, performer and director. She has been a member of The National Youth Theatre of Wales, the National Youth Theatre of Great Britain and the West Glamorgan Youth Theatre Company. More recently, she has been teaching in South Wales at Stanwell School and Gower College in the performing arts.

We have met Carmarthen Youth Opera's President and Chairman Wyn Davies and Mike Rogers in our first production meeting. Wyn Davies has been working with the company since 1985 and has been an avid supporter of the Lyric Theatre since its inception.

We will be working closely with Mike Rogers, our key line of communication to the production process. For this project we will be treating him as Production Manager, keeping him up to date with our progress and liaising any queries of the requirements of our set builds that he can pass onto other departments within the production. He will be attending more production meetings with us in the future, hopefully with Rhian so we can speak to her directly about our designs.



Rhian Holsworth
New director for the CYO this year, with a background in teaching, performance and directing. (Carmarthen and District Youth Opera, 2025)



Wyn Davies
Became President in 2019 having been involved with the Company since 1985. (Carmarthen and District Youth Opera, 2025)



Mike Rogers
Treasurer and Chairman. He has been a Chairman since 2005 and Board Member since 1994. (Carmarthen and District Youth Opera, 2025)

Research

The Lyric Theatre

The Lyric Theatre is the largest theatre in Carmarthenshire and one of the largest in West Wales. The building was originally constructed in 1854 as the Carmarthenshire Public Rooms and became The Lyric in 1918. The current auditorium dates from 1936. It contains red upholstered raked seating arranged across the stalls, mezzanine, and circle levels. The foyer is relatively large and includes a wooden box office booth in the centre. From the outside, the entrance appears small, as it is positioned between neighbouring shops. Inside, much of the original Victorian and Art Deco design has been retained, including a decorative mosaic in the entrance. There is also a 1930s Westar cinema projector located upstairs near the circle, and the theatre operates with a traditional fly tower.

The building is Grade II listed and has been owned by Carmarthenshire County Council since 2005. Before this, it was managed by a trust led by Elizabeth Evans (the founder of the Carmarthen Youth Opera), who organised a campaign in 1993 to prevent its closure. This campaign later became the subject of the 2022 film Save the Cinema, directed by Sara Sugarman. The film is based on the true story of Evans, who was a local hairdresser and youth theatre leader. As well as the main auditorium, the theatre includes a smaller studio space that was added during refurbishment works in 2007. This space is used for rehearsals, meetings, conferences, and smaller events, providing a more flexible area alongside the main theatre.



I watched a video about how the film came about and how Elizabeth Evans moved into the Theatre in order to protect it. As one of her efforts to save it, she also contacted Steven Spielberg for permission to premiere his film Jurassic Park (1993) at the Lyric Cinema.

Scourfield, A. (2022) Save the Cinema: How Jurassic Park helped Carmarthen theatre. https://www.bbc.co.uk/news/uk-wales-59940146

Research

The Script

The Sound of Music is a play with music by Richard Rodgers, lyrics by Oscar Hammerstein II, and a book by Howard Lindsay and Russel Crouse, based on the real-life story of the Trapp Family Singers. It premiered on Broadway at the Lunt-Fontanne Theatre on 16 November 1959, where it ran for 1,443 performances. The musical was warmly received by audiences and proved a major success, winning five Tony Awards in 1960, including Best Musical and Best Actress for Mary Martin as Maria, though some critics at the time considered it overly sentimental.

Its popularity grew even further through international stage productions and, most notably, the highly successful 1965 film adaptation starring Julie Andrews, which cemented The Sound of Music as one of the most beloved and enduring works in musical theatre history.



Shutterstock (2025) Rodgers and Hammerstein (1943) Uncredited



NYC Landmarks Preservation Commission (2018) *16 November 2018, On this day in* 1959, the musical The Sound of Music by Richard Rodgers and Oscar Hammerstein opened at the Lunt-Fontanne Theatre, it is one of the oldest theatres in the Broadway theatre district



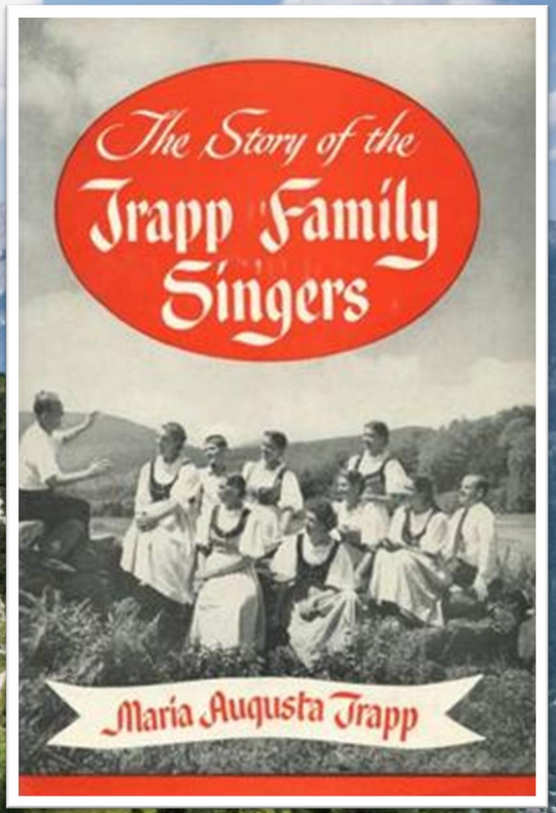


Rodger and Hammerstein (2025) Left -*Mary Martin, Lauri Peters and the rest of the child cast of the original 1959 stage show, Lunt-Fontanne Theatre*
Right - *Stills from The 1959 SOM Original Broadway production (from the R&H Archives)*

Research

The Real von Trapp Family
The story of the von Trapp family became famous through the real experiences of an Austrian naval officer, Captain Georg von Trapp (1880–1947), his children, and Maria Augusta Kutschera (1905–1987), who later became Maria von Trapp. Maria was a novice at Nonnberg Abbey in Salzburg when she was sent in 1926 to work as a tutor to one of Captain von Trapp's children; she later married the Captain in 1927 and helped care for his seven children (three of which were born after their marriage). Following the collapse of Austria's economy after World War I, the family lost much of their wealth and began performing music together, eventually becoming the Trapp Family Singers.

Their story first reached an international audience through Maria von Trapp's memoir, The Story of the Trapp Family Singers, published in German in 1949 (English edition in 1950). In it, Maria described their family life, musical development, and principled refusal to support Nazism after the 1938 Anschluss, when Austria was annexed by Nazi Germany. Georg von Trapp declined a naval commission offered by the Nazis and the family opposed Nazi ideology, prompting them to leave Austria in 1938; contrary to the musical, they did not escape dramatically over the Alps but instead travelled by train to Italy (Georg was an Italian citizen), and later emigrated to the United States. While The Sound of Music captures the broad outline of their lives: Maria's arrival, the family's musical rise, and their departure from Nazi Austria, it is a dramatized version, by altering personalities, simplifying timelines, inventing characters and events, and heightening the family's escape to Sweden for theatrical effect. Despite these changes, the core themes of family, music, and moral courage are rooted in the real von Trapp family's history, which is why their story continues to resonate worldwide.



Abebooks (2025) Story *of the Trapp Family Singers – Hardcover Von Trapp, Maria Augusta (1981)*

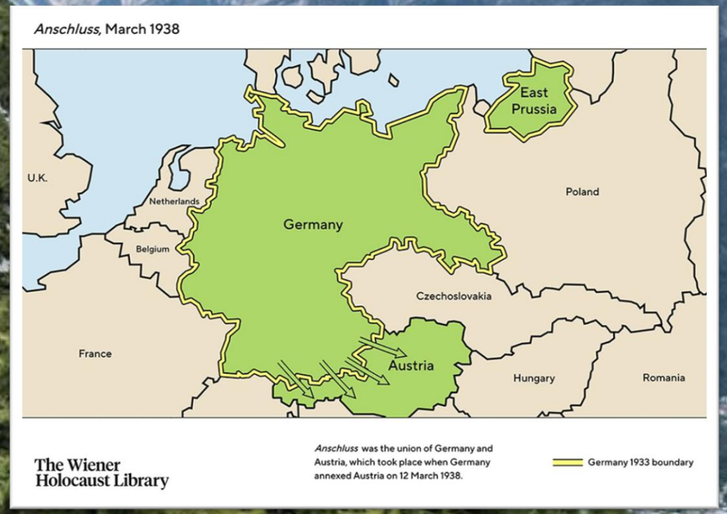
Research

The Setting
The Sound of Music is set in Austria in the late 1930s, primarily between 1938 and 1939, a period of intense political upheaval both within the country and across Europe. This setting is crucial to the story, as it coincides with the Anschluss of March 1938, when Nazi Germany annexed Austria. Until that point, Austria had been an independent nation struggling with economic hardship and political instability following the collapse of the Austro-Hungarian Empire after the First World War. The loss of national identity and sovereignty forms an important backdrop to the von Trapp family's story, particularly Captain von Trapp's strong sense of loyalty to Austria and rejection of Nazi ideology.

What led to the Anschluss?
By the end of the First World War Austria was in a state of political and economic weakness. The Austro-Hungarian Empire had collapsed, leaving Austria a small, landlocked country with high unemployment, inflation, and few resources. Many Austrians felt the country was too weak to survive on its own and supported unification with Germany, as they shared the same language and culture. However, this was banned by the Treaty of Saint-Germain, which caused resentment. During the 1930s Austria became politically unstable and was ruled by an authoritarian government, making it vulnerable to pressure from Nazi Germany. Hitler, who was Austrian-born, took advantage of this weakness and, in 1938, threatened invasion. With little military strength, no support from other countries, and significant support for union within Austria, the Austrian government did not resist, allowing the Anschluss to happen easily.



Bartko-Reher (2017) Postcard of Salzburg, Hohensalzburg Fortress 1930



The holocaust explained (2025) *The Weiner Holocaust Library*
A map of how the Anschluss (March 1938) took place

Research

The Setting

Across Europe, the late 1930s marked the rapid expansion of Adolf Hitler's power and the spread of fascism. Germany's aggressive territorial ambitions, combined with widespread fear of another major war, created an atmosphere of tension and moral uncertainty. Many governments and individuals were forced to choose between compliance or escape. In Austria, Nazi influence was increasingly visible in everyday life, including public displays of loyalty, political intimidation, and pressure on prominent citizens to support the regime. These realities are reflected in the musical through the presence of Nazi officials, the flying of the swastika, and the expectation that Captain von Trapp would serve in the German navy. The significance of this historical moment shapes the conflict of the play. While The Sound of Music is often remembered for its warmth, romance, and music, its emotional power is rooted in the moral stakes of the time. The von Trapp family's decision to leave Austria is not simply a personal choice but an act of resistance in the face of authoritarianism. The contrast between the innocence of the children's songs and the rising threat of Nazism increases the drama of the story and underscores the themes of freedom and courage. By setting the story at the starting point of the Second World War, the musical places a deeply human family story within one of the most consequential moments in European history, giving its hopeful ending added poignancy and meaning.



AESU (2015) *Salzburg sits on the border between Austria and Germany and is the capital city of the province which bears its name (1932)*



ABC (2023) Austrian women wave swastikas at Salzburg to celebrate the union of Austria and Germany (1938) following the German occupation. Getty Images



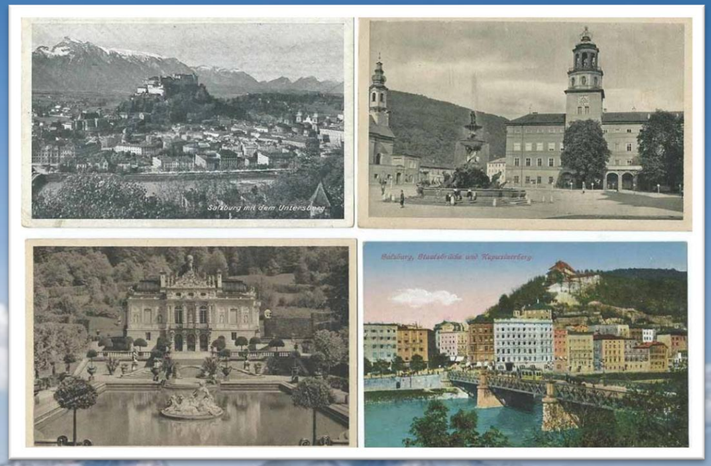
BBC News World Service (2024) Austrians welcoming German troops (1938). Keystone/ Hulton Archive/Getty Images

Research

The Film
Our first stage of the approach to designing for The Sound of Music was to surround ourselves in the world of its story. First, we watched The Sound of Music film (Robert Wise, 1965) and although I had seen the film, it was a good idea to re-experience it from through the eyes of a theatre designer and to begin thinking about how the gorgeous landscapes and grand villa can be translated back into its original form: a stage play. I wanted to look into the films background and why it was such a success. I wanted to know when the film was made, by who and where…

The context:
Time period and setting
- The Sound of Music is set in Austria in the late 1930s, mainly between 1938 and 1939.
- This period directly coincides with the Anschluss in March 1938, when Nazi Germany annexed Austria.
- The timing is significant as it places the story immediately before the outbreak of the Second World War in 1939.

Austria's situation at the time
- After the collapse of the Austro-Hungarian Empire following World War I, Austria faced economic hardship, political instability, and a weakened national identity.
- Many Austrians were divided between supporting German unification and preserving Austrian independence.
- The Nazi takeover resulted in the loss of Austria's sovereignty and the rapid imposition of Nazi laws, symbols, and authority.



Münzversand Mag. Peter Macho (2020) Salzburg postcard lot 1900-1930, 3 pieces: Staatsbrücke, Residenzplatz plus 1 St. Linderhof,



Central European Economic and Social History *(2018) Mother Lola and her daughter, Herta, in traditional costume 1943 in the Alps*

Research

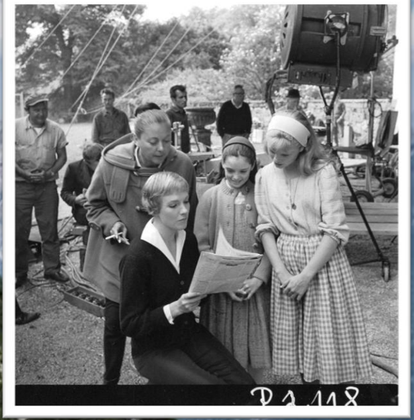
Wider European context
- Across Europe, the late 1930s saw the rapid rise of Adolf Hitler and the spread of fascism.
- Germany was expanding its power through intimidation and territorial annexation, creating widespread fear of another major war.
- Individuals and governments were forced to make difficult choices between cooperation, resistance, or exile.

Impact of Nazism in everyday life
- Nazi ideology became increasingly visible in Austrian society through flags, uniforms, public displays of loyalty, and political pressure.
- Prominent citizens, including former military officers, were expected to support or serve the Nazi regime.
- In the musical, this is shown through the presence of Nazi officials and Captain von Trapp being pressured to accept a commission in the German navy.

Significance to the story
- The historical context drives the central conflict of the play, transforming it from a family musical into a story about moral courage and personal integrity.
- Captain von Trapp's refusal to serve the Nazis reflects loyalty to Austria and rejection of authoritarianism.
- The family's decision to leave Austria represents a conscientious stand against oppression, not simply a search for a better life.

Rodgers and Hammerstein (2019) *Directing "Do-Re-MI", The Sound Of Music Handbook*





Rodgers and Hammerstein (2019) The latest issue of Variety makes its way to The Sound of Music set in Salzburg – bringing Julie Andrews the news of her Oscar nomination for Mary Poppins, *The Sound Of Music Handbook*

Rodgers and Hammerstein (2019) The Fox Studios Lot, 20thCentury Fox



Research

Filming locations:
The Sound of Music (1965) used a combination of extensive on-location filming in Austria and studio-based filming in Hollywood.
This blend allowed the film to showcase authentic European scenery while maintaining technical control for interior and musical scenes.

On-location filming (Austria and nearby regions)
- Many of the film's most iconic outdoor and landscape scenes were shot on location in and around Salzburg, Austria, and nearby Alpine areas.
- Famous locations include Mirabell Gardens, Nonnberg Abbey, Felsenreitschule, and Salzburg's Old Town.
- The outdoor sequences for "Do-Re-Mi" were filmed across several real locations, including hills, meadows, and town landmarks.
- Mountain and meadow scenes, including Maria singing at the start of the film, were filmed in the Alpine regions of Austria and Bavaria.
- The wedding scene was filmed at Mondsee Abbey, adding historical authenticity.
- The exterior of the von Trapp home was created using a combination of real buildings, most notably Frohnburg Palace and Schloss Leopoldskron.

Soundstage filming (Hollywood)
- Most interior scenes were filmed on 20th Century Fox soundstages in Los Angeles.
- This included interiors of the abbey, such as Maria's bedroom and convent scenes.
- The majority of the von Trapp household interiors, including dining rooms, living areas, and the ballroom, were studio-built sets.
- The iconic gazebo scenes ("Sixteen Going on Seventeen" and "Something Good") were filmed on a soundstage using a specially constructed, enlarged set.
- Some scenes that appear to be outdoors, such as the cemetery escape sequence, were also recreated on indoor sets for greater control.

Research

Who produced the film and why:

- The Broadway musical the Sound of Music, which premiered in 1959 was created by:
- Richard Rodgers – composer of the music
- Oscar Hammerstein II – writer of the lyrics and book

Their work was already well known and respected, as they had previously created successful musicals such as Oklahoma! (1943) and The King and I (1951)

Film production details

- The film was produced by 20th Century Fox, a major American film studio.
- Robert Wise was both the director and one of the producers of the film.
- Saul Chaplin was the other main producer and was responsible for overseeing the musical elements of the film.

Why The Sound of Music was made into a film

- The Broadway musical had already been a major commercial and critical success, making it a strong candidate for a film adaptation.
- By the early 1960s, 20th Century Fox was facing serious financial difficulties, largely due to the high cost and disappointing returns of the film Cleopatra (1963).
- The studio needed a reliable, large-scale hit to recover financially.
- Musicals were still popular at the time, especially family-friendly films that could appeal to a wide audience.
- The story was seen as safe, uplifting, and commercially attractive, particularly compared to riskier or more controversial films.
- The setting in Austria and the historical background gave the film an international appeal, helping it succeed outside the United States.
- The film format allowed for spectacular scenery, large musical numbers, and emotional storytelling, which suited cinema better than the stage.

Research

As part of the brief for the project, we have been asked to make swastika banners that feature in the final scene at the Saltzburg Music Festival. I wanted to look into the symbols history and significance today, as part of my approach to working on these pieces of set dress.

The Nazi Party and the Swastika:

Origins of the swastika

- The swastika is an ancient symbol, used for over 3,000 years across many cultures including those in India, China, Central Asia, and Europe.
- Traditionally, it symbolised good fortune, well-being, prosperity, and the sun, particularly in Hinduism and Buddhism
- In Europe, versions of the symbol appeared in ancient artifacts and folk art long before the 20th century, often associated with luck or continuity.
- In the late 19th and early 20th centuries, some European nationalist groups misappropriated the swastika, falsely linking it to ideas of “Aryan” racial identity.
- These racial theories were based on false ideas spread by the far right and were used to promote ideas of ethnic superiority - In the early 20th century, some nationalist groups in Europe wanted a symbol of ‘pure’ Aryan identity and they chose the swastika because it had ancient Indo-European roots, which they falsely claimed tied it to the ‘Aryan’ lineage.

Hitler and the Nazi Party

- Adolf Hitler adopted the swastika as the central symbol of the Nazi Party in 1920.
- Hitler personally designed the Nazi flag: a black swastika tilted at an angle, inside a white circle, on a red background.
- According to Hitler, the colours symbolised:
- Red: the social idea of the movement, White: nationalism, Black swastika: the supposed “Aryan” struggle and racial ideology
- Under Nazi rule, the swastika became very common, appearing on flags, uniforms, buildings, books, and official documents to reinforce loyalty and fear.

Research

Its role during the Nazi era

- The swastika became inseparable from Nazi ideology, representing dictatorship, militarism, antisemitism, and racial persecution.
- It was directly associated with state violence, genocide, and the Holocaust, in which six million Jewish people were murdered, along with millions of other victims.

Meaning after World War II

- After 1945, the swastika became one of the most widely recognised symbols of hate.
- It is banned or heavily restricted in several countries, including Germany and Austria, except for educational, historical, or **artistic contexts.**
- The symbol is commonly used by neo-Nazi and extremist groups, reinforcing its association with hatred and intolerance.

Its meaning today

- In Western contexts today, the swastika is overwhelmingly associated with Nazism, antisemitism, and genocide.
- Its original positive meanings still exist in religious and cultural contexts, particularly in Asia, though these uses are often misunderstood in the West.
- The symbol serves as a powerful reminder of the dangers of propaganda, authoritarianism, and racial hatred, and why historical education about its misuse is essential



ALCCA (2025) *Swastika Awareness Coalition. The Swastika and the Hakenkreuz: Understanding the Difference*



Harry S Truman library (2015) World War II soldiers with captured Nazi flag (1945)

Research

Next, I focussed my research on what we will be making for the production:

1. Gazebo (for Rolf and Liesl's performance of 'Sixteen Going on Seventeen'). To possibly be used later for Maria and Georg's engagement
2. Bridge (to be a wild bridge in a forest, then used to show the family climbing the mountain when they escape.
3. Birch Trees (for a dance number, to be held by performers)
4. Banners (to hang during the Kaltzburg Festival scene, to show that Austria is now under Nazi occupation.)

As a class we each took some time to brainstorm how we could make these components, according to the Carmarthen Youth Opera's rough brief.

1. Gazebo

In the production, the Gazebo is used in Act 1 Scene 6, and Act 2 scene 1 (to be confirmed as this second appearance isn't in the script). As we saw in the film, the Gazebo has benches in it that are used in the performance for 'Sixteen Going On Seventeen'.



Wise, R. 20th Century Fox *The Sound of Music (1965) Still*



Vulture (2019) *The Sound of Music live: review Katlzburg Festival Scene*



Brenner, M. (2025) *The Sound of Music at Curve Theatre, Leicester*

Research

How we could make the Gazebo

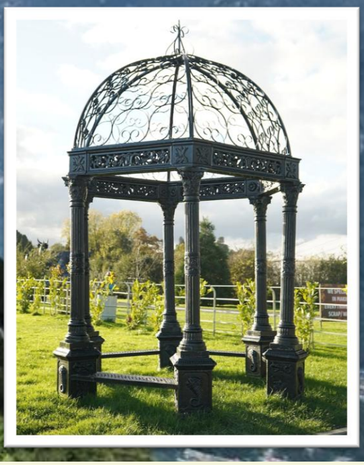
- It needs to be made so it can be stored in the limited space of the Lyric Theatre's wings – it must able to come apart or be made up of individual components (like the walls, for example) and then put together on stage. It is quite a large structure - to mimic a real Gazebo and to be large enough for a duo dance performance. The separate components could be made up of flats on wheels, constructed from timber or metal.
- We have the option of incorporating MIG (Metal Inert Gas) welding and using steel in the construction process, which offers clear advantages in terms of strength, consistency, and longevity compared to timber.
- A welded metal structure is significantly stronger because metal is uniform, dense, and able to handle high loads without changing shape. This makes it particularly suitable for a tall structure with a bench that will be danced on. Metal frames are very strong, especially at the joints, as welded connections are far less likely to loosen or fail under repeated movement and impact. Metal is also highly durable, allowing the structure to withstand frequent use, transport, and assembly without weakening over time. Unlike timber, which can have knots, grain variations, and weak points that may lead to splitting or warping, metal is consistent in its structure. This consistency makes metal more predictable and reliable, resulting in a stable and secure set piece for performance.
- The major downside of this idea is that the metal appearance is less favoured by our production manager who seems very inspired by the film's wooden Gazebo design, and also the class's preferences too who want to lean away from using metal as a material.



An example of an outdoor wooden pergola. Door County Today (2019) *Actors Sean Fortunato and Linda Fortunato in "Talley's Folly" by Lanford Wilson*



We could make our Gazebo walls on wheels for moveability Flickr (2014) *Flat on wheels (photo credit unknown)*



A metal gazebo example. Black Country Metal Works (2025) Ornate Wrought Iron 'Somerford' Garden Gazebo in black

Research

How we could make the Gazebo

- One thought I have to make the benches structurally secure is to make them with a singular long bench leg to supply more surface area. Or, the benches could be attached to the walls of the gazebo with a lining applied to its underside that creates friction and stops them moving, However, if we go with a solid design, either with benches and walls attached to each other or with a singular box-like bench leg – how do we make sure it's light enough to be moved on and off stage?
- From the director, we need to know what size/height/distance the benches are that they are rehearsing on – they may want us to make our benches the same sizes as the ones they are rehearsing on, which are likely standard seat height - roughly 420mm to 480mm.
- To add detail, we could add a ¼ roof to give the impression of the Gazebo's shelter. We would need to consider weight distribution and how a ¼ roof could affect the weight distribution of the Gazebo walls and the lighting of the Gazebolike if having a roof casts shadows on the performers.
- Like the film, we could add 'glass' panels (which we would make from a non-fragile material like acrylic Perspex), this would help make it lighter than if it was a solid wooden structure and add aesthetic appeal. In the film, the young couple use the Gazebo as shelter from the rain, we could add the impression of rain drops by applying drops of hot glue or resin. The only downside of this, is that these materials are permanent, and the second scene where the gazebo is needed may not need raindrops on the glass. As an option, the raindrops could be temporary for the first scene - made form mixing glycerine or petroleum jelly and water, which are common uses for making fake sweat or condensation water drops in advertising.
- To make the Gazebo appear as though it is outside, we will need to add some organic elements like vines and moss, weather damage, lichen etc.
- In terms of making the Gazebo moveable, we could put it on wheels which can be put on brakes and concealed – perhaps with the use of a skirting board.
- For deciding between a metal, wooden or stone like structure, we have the option of creating a hybrid design. For example, a stone and wood design where the base and pillars are stone with wooden posts and a roof. If we pitch an idea that is alternative to the films design and we support it well enough with references and ideas on why it works for the production, we may be able to persuade the director to go with an alternative design to the white wooden gazebo in the film.

Research

The film's design

The original filming location was at Schloss Leopoldskron, and due to preservation concerns, the gazebo was later relocated to the grounds of Hellbrunn Palace in Salzburg, Austria, where it still stands today as a popular tourist attraction. The interior of the real gazebo was too small to shoot inside of for the 'Sixteen going on Seventeen' and 'Something Good' musical numbers, so it was reconstructed and shot on a sound stage in Los Angeles.

- The gazebo's design reflects European garden architecture, particularly the tradition of ornamental pavilions used in estates during the 18th and 19th centuries. These structures were meant as romantic, decorative features rather than functional buildings.
- Austrian architecture draws heavily from Roman, Renaissance, and especially Baroque traditions, due to Austria's historical role as the centre of the Habsburg Empire (1273 to 1933)
- Put simply, the Habsburg Empire was a powerful European dynasty that ruled large parts of Central and Eastern Europe for several centuries. Its territories at different times included modern-day Austria, Hungary, the Czech Republic, parts of Germany, Italy, Spain, and the Balkans. Rather than being a single nation, it was a collection of land united under one royal family, with Vienna as its political and cultural centre. The empire strongly influenced European politics, art, and architecture, especially through Baroque styles and grand palaces.



The original filming location for the Sound of Music (1965) Tourismus Salzburg (2024) *Leopoldskron Palace and the Fortress Hohensalzburg*



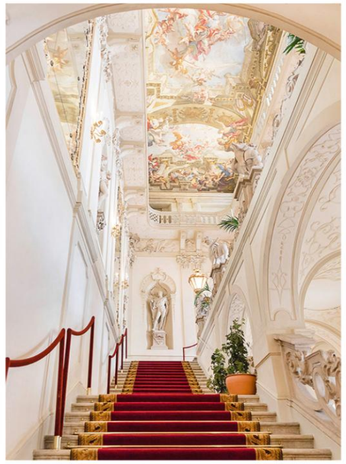
Encyclopaedia Britannica, Inc Austria-Hungary, 1914 Map of Austria-Hungaryc

Research

- Baroque architecture flourished in Austria in the 17th and 18th centuries and emphasised grandeur, symmetry, theatricality, and a strong connection between buildings and landscaped gardens – an important consideration for when we are designing our gazebo, to make sure it looks seamlessly integrated to both the Villa and the Austrian countryside.
- The Captain von Trapp's villa, filmed primarily at Schloss Leopoldskron, is a clear example of this influence. The palace showcases Baroque and Rococo elements, including balanced symmetry, elaborate detailing, spacious interiors, and an integrated design with water and garden features which are common in upper-class Austrian design.
- Together, the gazebo and the villa visually reinforce themes of romance, order, and Old-World elegance, grounding the film in a distinctly Austrian architectural identity while also serving the emotional and musical storytelling of the narrative.



Vienna Unwrapped (2022) Baroque Architecture in Vienna: Schonbrunn Palace



Palais Daun Kinsky (2018) *Palais Events*



Schloss-leopoldskron (2025) *Photo Gallery*



Expedia (2025) Hotel Schloss Leopoldskron

Research

Trees

As mentioned earlier, the Trees we need to construct are Silver Birch, which are native to Austria as well as other parts of Europe and Asia. Silver Birch thrives in various European climates, often found along woodland edges, mountain meadows and riverbanks in light, well-drained soils. They're found in areas at sea level up to high altitudes and grow in sandy or rocky soils, often first appearing in clearings or disturbed landscapes – they don't mind pollution and are fast growing. I thought this was symbolic to the films setting which will face a lot of disturbance in the coming years, yet it will be defiant and eventually come out on top, showing resilience much like the Birch Tree's growth.

The leaves of a silver Burch emerge in early Spring, turning green in Summer then yellow in Autumn before dropping them in Winter. The Silver Birch represents renewal and resilience due to their adaptive abilities to different climates. They are characterised by their slim white trunks with black horizontal lines that mark the bark. From looking up images of the Silver Birch, I found their markings much like eyes, they have a high contrast between their stark white appearance and dark knots.



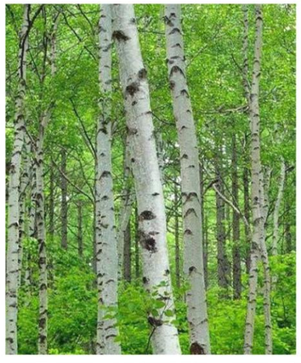
Heart of England Forest (2024) Silver Birch



Paramount Plants (2025) Silver Birch Betula Utilis Jacquemontii



Naturescape (2025) Silver Birch Barefoot



Trees by Post (2023) Silver Birch - Betula pendula

Research

How we could make the trees

There are many theatrical techniques and design methods when it comes to making a tree, and a lot of it depends on how big and realistic you want them to be. How the trees will be used by the performers will strongly influence our design. Possible ideas/ materials include:

- **Plastic piping** – these can be either the thickness of the tree trunk, which could be textured and craved into by applying Idenden to its surface. Or if need be, the trees could be made super lightweight with thin plastic tubing, clad with cardboard in a 2D design, or to make it 3D, yet still lightweight, use foam tubes with the thin plastic inside for structure. For this I was thinking of the foam tubes used by the now 3rd years for their Lollipops for Charlie and the Chocolate factory. The downside of this is that it is a soft material, and needs to appear solid, this could be suitable if we use a very dense foam so it isn't so pliable or coat it with Idenden or Jesmonite so it forms a hard layer. On simplified designs, I've seen paper used to create a bark peeling texture, this could be a simple and very affordable method for adding texture.
- **Warbler** – a better option for the tree branches rather than the trunk itself. You could form the Warbler around a branch to mould to it. The advantages of Warbler are that it adheres to itself which makes it great for layering. Warbler is commonly used in costume making for components like armour, this is because one of its main advantages is that it is a thermoplastic, meaning it becomes soft and mouldable when heated (usually with a heat gun) and hardens again as it cools. This allows makers to sculpt directly onto a base form, their own body (with protection), or over materials like foam. If a mistake is made, it can simply be reheated and reshaped, making it very forgiving. It is also lightweight which makes it a comfortable option for costume, but is also a useful trait for ensuring our trees are moveable.

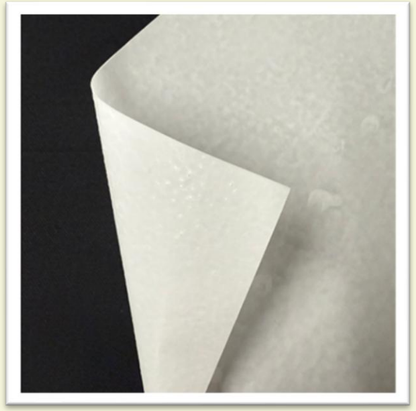


National Theatre of Scotland (2013) *Left the Right One In*

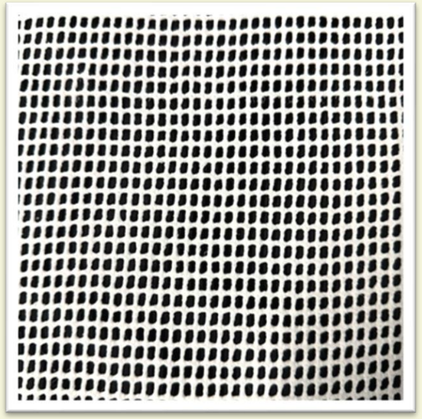
Research

How we could make the trees

- **Varaform** - Also adheres to itself but has an open weave that needs to be covered with a fabric for example, through scrimming (Muslin and Idenden applied in a papier-mâché style). Varaform which is a thermoplastic mesh can be woven or shaped to create lightweight branch structures or roots. As it adheres to itself when heated, it allows for sculptural forms without heavy fixings. It may be particularly useful for creating irregular root bases that blend into the stage floor.
- **Plastazote** - A versatile option that can be carved into to create bark texture. Layers can be laminated together to build up trunk thickness, then shaped using rasps, hot wire tools, or knives. Once sealed with texture or Plastazote primer and paints like HexFlex (will bend instead of peel with the material), it becomes lightweight yet durable. For silver birch, carved horizontal striations and characteristic peeling bark markings could be incised before painting. Plastazote is especially useful if the trees need to be moved frequently, as it is robust but light. Plastazote could be used around plastic piping and stuck to it with expanding foam.
- **Expanding foam for the tree trunk** - makes organic root-like shapes. Once dried this can be carved, sanded and painted. Once cured, it can be carved, sanded, and painted. This could be sprayed over a pipe armature to build up trunk volume quickly. However, it requires careful control, as it expands unpredictably and can become messy. It is also more suitable for static set pieces rather than items that need to be handled extensively, unless sealed thoroughly with a water-based sealant like Mod Podge, Rosco Flex bond or FoamCoat.



Flints (2026) *Varaform Gauze Membrane Roll £40.65 (per metre)*.
This is the thinnest form of Gauze you can get from flints which is commonly used to coat other structural materials to add detailing. Varaform stick to itself and is moudbale when heated, and sets once cooled.



Varaform Heavy Roll £49.50 (per metre).
This is the densest and heaviest Varaform that Flints offers, making it ideal for structural scenic work. It could be used for forming tree trunks, large roots, and thick branches. It can span gaps without sagging and typically requires far less internal armature or support than lightweight gauze.

Research

Banners

For this production, we have been asked to create flags bearing the swastika, the symbol used by the Nazi Party during its rise to power and period of government. The Nazi's first adopted the swastika as their official party emblem in 1920, and it later became the national flag once they came to power in 1933, ruling Germany and occupying parts of Europe until 1945. Although the swastika is an ancient symbol that once represented good fortune or the sun in many cultures, it was misappropriated in the early 20th century by nationalist groups in Germany and Austria, who wrongly linked it to ideas of racial superiority. Hitler embraced this distorted meaning when designing the Nazi flag, which he credits to himself in his autobiography: Mein Kampf (1925).

While the appearance of the swastika on stage may cause discomfort for the audience, it serves a vital historical and dramatic purpose. The moment when Captain von Trapp tears down the Nazi flag stands as a powerful symbol of resistance and courage. To support this, we will be creating banners to hang from the theatre tabs, including one designed to be easily torn and reset each night for consistency in the performances. Throughout this process, we remain fully aware of the painful history associated with this symbol, and we approach its use with sensitivity. Omitting the swastika entirely from the performance would risk confusing the story, as it is crucial in conveying the oppressive regime from which the characters are resisting. We know the inclusion of the swastika is strictly a storytelling device meant to reflect historical reality and is in no way intended to glorify the Nazi party.



Mike's banners reference sent to us 10° december (source unknown)



Photograph: Popperfoto/PPP
This is how the swastika was displayed at events, here is an exmaple from the 1936 Berlin Olympics.

Research

The producers and how they use the Swastika

During a class discussion about producing the Nazi banners, we talked about how we felt about using that imagery and the responsibility that comes with it. It made me think about other times I've seen the swastika used in performance, particularly in The Producers by Mel Brooks and Thomas Meehan, adapted from the 1967 film. Seeing it in that context made me reflect on how the symbol can function differently in art, and where the line lies between using it to inform, critique, or satirise, and when it risks crossing into something inappropriate.



Brooks, M. The Producers (1968) - Springtime for Hitler Clip
https://www.youtube.com/watch?v=ovCf9VRLnDY&t=30s

In The Producers, the swastika and other Nazi symbols are used very deliberately, not to glorify the Nazi Party, but as satire and to ridicule it. The central joke of the musical number 'Springtime for Hitler' is that the producers attempt to create an offensively pro-Nazi musical in order to guarantee failure. Instead, the audience interprets it as outrageous satire. The number presents Hitler as absurd, camp, and ridiculous, undermining the ideology by making it the target of the joke. The humour works because the show is clearly mocking fascism, not endorsing it. The swastika becomes a visual shorthand for something monstrous and historically real, but it is framed within irony.

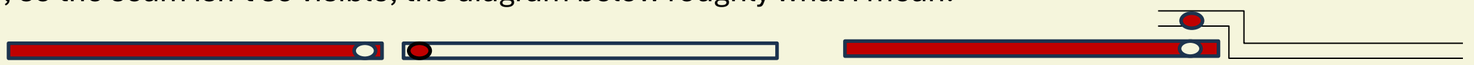
This demonstrates an important distinction of how context determines somethings meaning. Hate symbols in art are not inherently endorsements; they are visual language. In historical drama such as The Sound of Music, Cabaret, or films like Schindler's List, the use of Nazi imagery reflects historical accuracy. Not using the symbol entirely could risk softening the reality of the regime. The swastika at the forefront of Nazi-controlled Austria and Germany. To remove it completely would be historically dishonest, and arguably could dilute the weight of what the story is communicating.
However I believe the ethical line is crossed when: the symbol is glamorised without critique; it is used purely for shock value; it is presented in a way that invites admiration or neutrality rather than critical distance or the suffering connected to it is trivialised.

Research

Banners

How they can be made

- If we are hand stitching them, the fabric can be ordered from Whaley's and we would need a vivid red, white and black. To also look better in quality if we hand stitch them, the flags could consist of two layers of fabric sewn using the bagging out method, with the design appliqued on.
- Alternatively, we could have them printed. Printed material may not be as bold and may allow light through. We want the red colour to stand out as was its purpose at the time, if need be, we could make a lining for it.
- Another concern is it could be a bit odd to order, or hard to find someone to print this design. We would need to make sure we are getting them from a reputable source.
- In the film, Captain von Trapp rips the flag. So that Christopher Plummer could rip it with ease, they added a seam where it could be pulled apart. This could be a possibility, but it would be very time consuming having to resew the stitch after every performance.
- Another option could be to have multiple of the same flag to be ripped each night, but this is wasteful. Also, because there will be three layers of fabric to rip, unless the design is printed onto the material, it could be very hard to rip and do so the same way each night – there could be a small rip in place to help the performer begin the action.
- Velcro to rip – creates a good sound and can be reset each night. Long lasting, won't lose its tackiness over the 5 performances.
- For the Velcro rip we'd have to consider if they want it to make a sound, or if this will be a sound effect, could also be too close to someone's mic so would have to make sure they can be muted for the ripping
- Magnets – may may the flag look too easy to take apart, but magnets are sturdy and easy to reset
- When using magnets, Velcro or poppers, we would need two hems at where the flag will rip, to not make this too obvious, we could make sure the fabrics overlap slightly, so the seam isn't so visible, the diagram below roughly what I mean:



Budget Meeting

We our first budget discussion as a class – the initial budget was £3592.00, then the budget was updated to £3950.00 later in the process. The following is a list of items discussed and things we need to consider throughout the sourcing and buying process:

- We can make our own budget list with the Item, Cost, Amount/ qty, shipping and Total
- If we choose to handle the transportation of our set pieces, this will be included in or budget for a days van rental
- We need to consider the cost of fire-proofing where applicable – Jesmonite and Idenden is flame retardant, resin is not. Rosco's make a flame proof additive, we will also use a flame-retardant topcoat. It's important to note: if the room is too cold, the flame proofing in the final stage can cause blooming and add a cloudy look, this can also be caused by applying flame check over varnish – Rosco's additive is a safer bet than adding the top-coat. It's unpredictable and you don't know how it has affected your work until its dry.
- To find totals Dave includes delivery cost and VAT in the final cost
- If we choose to use metal, we can source it locally or from the Metal Store. We would buy 30x30mm box steel, so it doesn't get lost on stage and is visible
- Black country metal works – make decorative elements
- We will be buying from Flints for our glues, paints and primers
- Metal will need cleaning to remove oils then two coats of paint, flints make their own white that can be used as a top-coat on metal.
- In terms of fire-proofing, Plywood and MDF used for scenery are often required to be flame-retardant treated, particularly when they are under 18mm (¾ inch) thick. While 18mm is commonly considered substantial enough to resist rapid flame spread, thinner sheet materials such as 6mm or 3mm plywood are significantly more combustible and typically must be treated with an approved flame retardant, this can also depend on venue regulations.



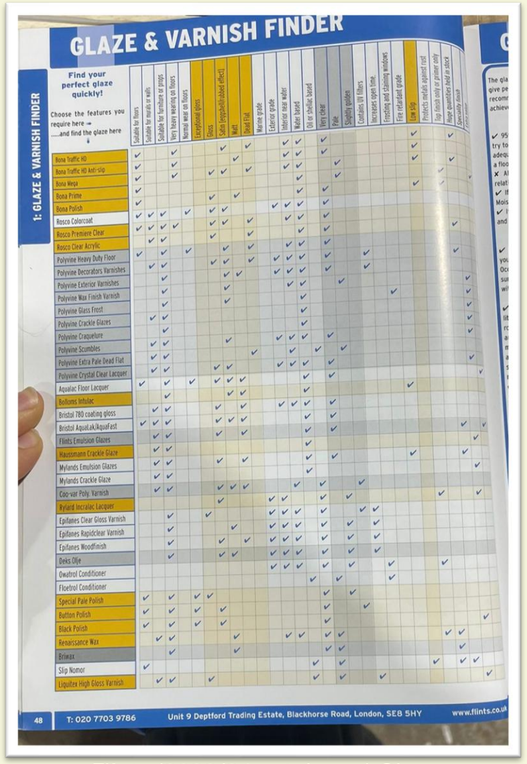
Flints (2026) Flamecheck PLUS 1 L Certified for cotton and polyester



Flints (2026) Rosco Flamex PA 8oz additive for paint

Budget Meeting

- Polystyrene or PVC pipes for the birch trees (PVC pipe is favoured by Dave). We can use joins that come with the piping to make branches from the pipes
- If using Smooth-on and epsilon (VOC free resin) these are water based which means we don't need to wear PPE. They are safer to work with and cheaper than Jesmonite yet not as hard-wearing
- We have resin left over from the dragon that we can use, look at Peter Evans Studio for mouldings
- The Bridge group will use 4x3, 3mm ply on the sides then stick polystyrene to it to poly carve or vac form the shape of the stones. Then they will need to seal this - could use Jesmonite for a highly effective stone effect
- Bristol Aqualak, found under 'Glaze and Varnish finder' in the Flints catalogue, is a binding agent that we could use in combination with left over Mylands pigment powders, which we have a lot of in Earth tones such as Yellow Ochre, Burnt Umber and Raw Umber.
- Discount fabrics sell 50m of 1.5m wide fabric at £168, it is cotton and we can purchase this in red and off-white (pure white could make lighting bounce around) and black.
- Will need chain at the bottom so it sits weighted, which we have in store already.
- Wood and pipe materials can be bought from Pembrokeshire Building Supplies, and we will combine what materials we need for each piece of scenery to order it all at once. Other useful sources for screws, filler, contact adhesive, scenic art tools etc. are Flints, ScrewFix, B&Q and Tool Station.
- Once we have a finalised design which includes sketches and mood boards, a scale model and technical drawing of the set piece, we will have come to a decision about what materials we want to use for our build and be able to work out the quantities of what we need to order.



Flints (2023/24 catalogue) Glaze and Varnish Finder

Implementation

One of my first approaches to the implementation phase, and as part of my research, I wanted to get some ideas out of my head into visual references. I started looking at existing examples and their common design elements, that were close to what I was envisioning and put these into mood boards.

Gazebo

- I looked at varying designs - outdoor garden structures made from metal and traditional romantic designs with baroque influences and detailing.
- I liked the look of a metal style Gazebo but felt they could look pretty boring, they're usually one colour with few decorative details.
- I looked at some that included different swirling patterns and flowers which could be metal as part of the structure, filigrees, or fake climbing greenery.

Birch Trees

- I looked at examples of Birch trees through every season – though the play is set in early March, we are not exactly sure of the timing of when the birch trees are used in the context of the story.
- Despite this, we have the option to choose what best suits our design - leaves or no leaves. My worry with the use of fake leaves is it may look a little gimmicky if there isn't enough of it.
- We could have bare branches and not that many of them and make them thicker than a traditional birch branch, this means there isn't a risk of them breaking
- I added some examples of birch trees made for stage performances
- Some with stands (like legs or stumps), some 2D to be very light (this could be suitable depending on how they need to be used i.e. held by children), and some made from piping and decorated with peeled paper which I thought was a clever yet simple recreation of birch texture.
- I looked into some of the pollen and associated flora of the Silver birch that could be included in the design:

• Male Catkins ("Lamb's Tails"): These are long (4–6 cm), drooping, yellow-brown, and flexible catkins that hang in groups of two to four at the tips of twigs, releasing pollen in April and May.
• Female Catkins: These are smaller (around 3 cm) and bright green, appearing alongside new shoots in spring.
• Pollen: The pollen is a fine, yellow powder produced in massive quantities for wind pollination.

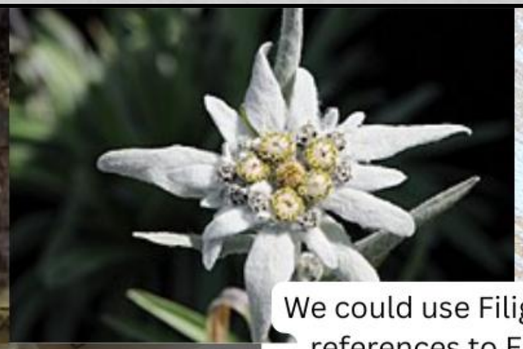
Banners

- For the Swastika banners, I looked at how they were displayed in the Second World War during rallies and events – even non-political ones like the Olympics
- I thought about how a rip-able banner can be made using Velcro or magnets

Stills from the film when the Gazebo is used







We could use Filigrees to add references to Eidelweiss.





Window frame shaping. We could use *glass* pannelling in a wooden or metal frame



Baroque inspired columns, in theme with the design and colour of the Captain's Villa











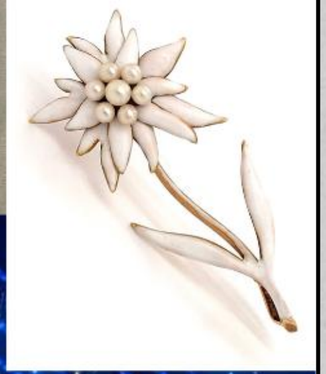
Some examples of metal gazebos with no panelling, this structure could be made to be light and thin - good for transport and storge











An example of a simplified Gazebo structure used in Strictly Come Dancing (2025)



This stain glass idea is beautiful - may be confused with the nonnberg Abbey Setting



We could add floral deatil using metal

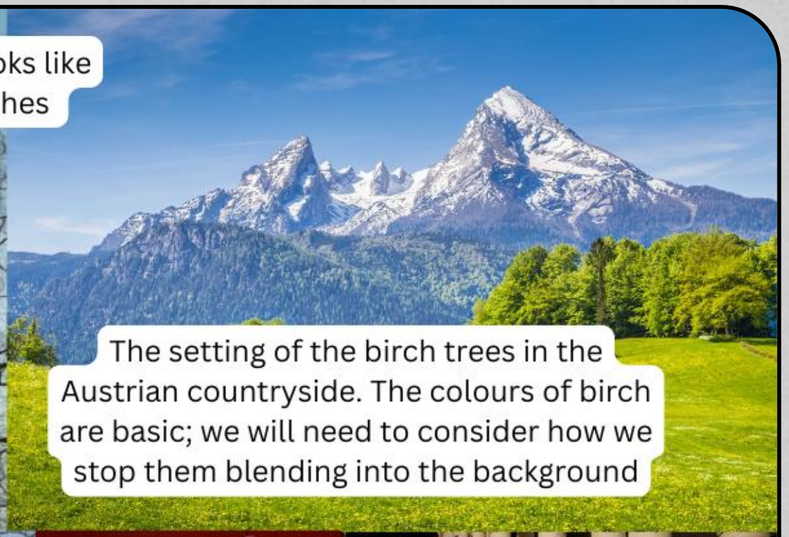


Litograph of the associated pollen and flora produced by Silver Birch





What the top of a Birch tree looks like incase we want to add branches



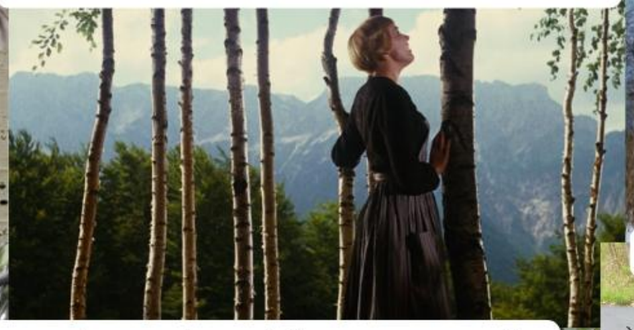
The setting of the birch trees in the Austrian countryside. The colours of birch are basic; we will need to consider how we stop them blending into the background



A winter setting of bare birch trees

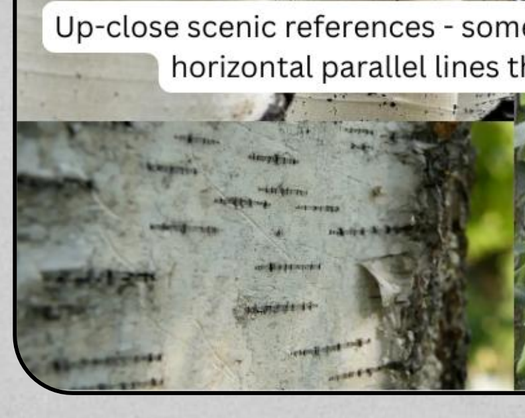


Examples of tree props and scenery



Still from the film, we will need to find out how the trees are used and how much is visible





Up-close scenic references - some marks are shaped like eyes, some like horizontal parallel lines that mark the length of the tree



Silver birch leaves - green during spring/summer months







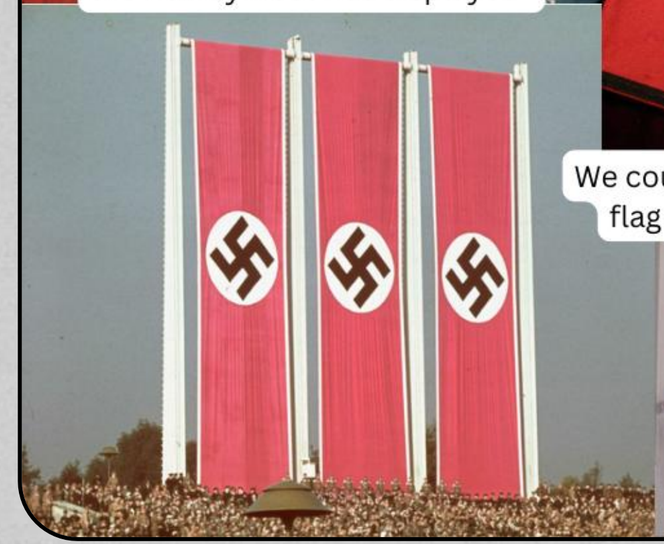
examples of stands for the trees so they can be free standing







Real life WWII examples of how the Nazi symbol was displayed





How our banners may look for the concert scene



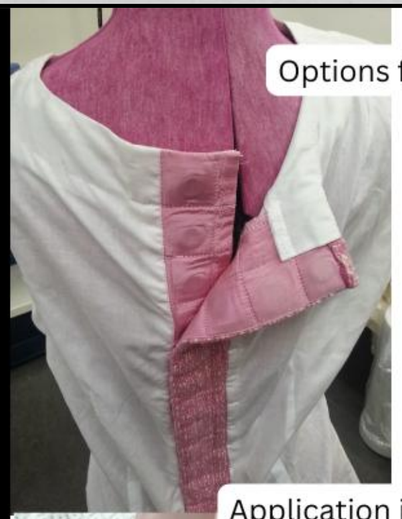
The Nazi symbol was also used on clothing - SS and party members wore an arm band for identification





We could propose a ripable flag as used in the film



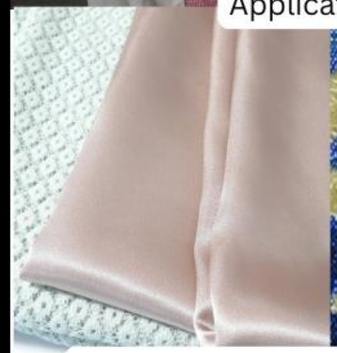


Options for creating a ripable seam - velcro, costume magnets, poppers





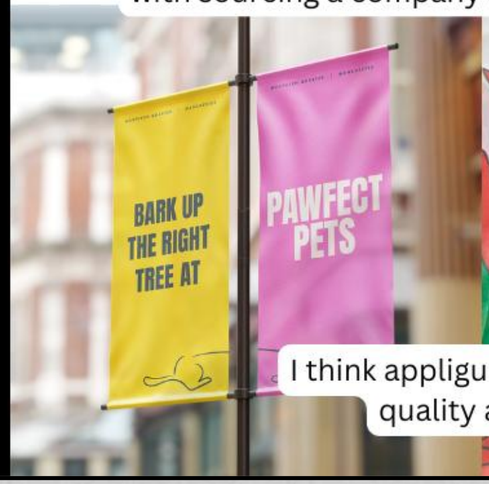
Application ideas - applique, bagging technique







Could have the flags printed, but that may bring up issues with sourcing a company willing to print he design

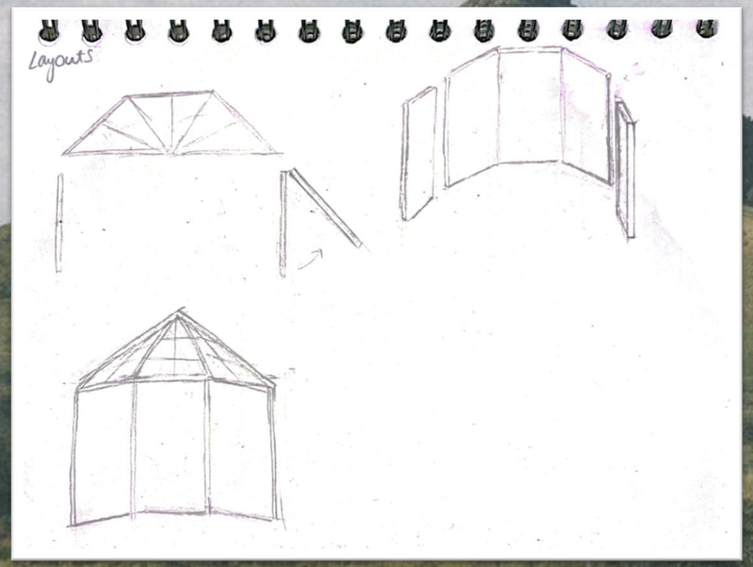


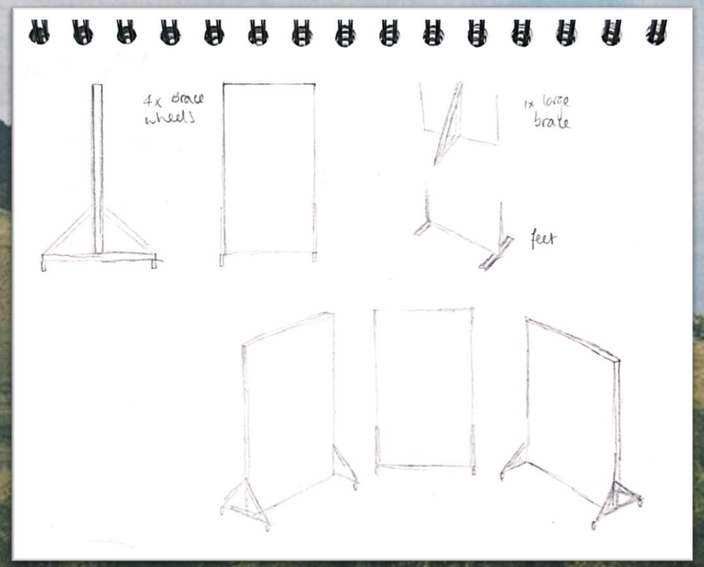


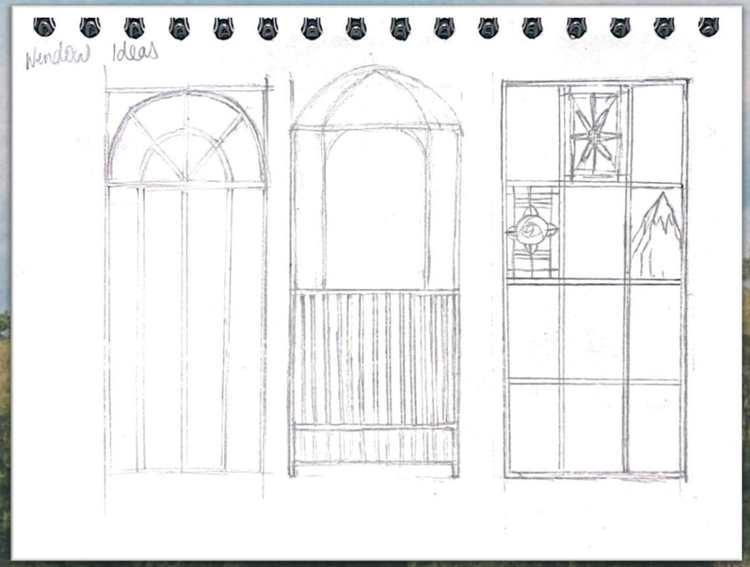
I think appligue looks better than printed - improves the quality and makes the flag less see-through

Implementation

Next, I made some sketches to pencil ideas for the shape of the structure and how it could be supported. I am not very confident as a free-hand illustrator. I usually use programmes like Procreate where I can turn on assisted drawing functions like a grid, use scale and ortho mode and use shape tools - this is why I enjoy processes like AutoCAD and want to improve with Fusion as I enjoy using assisted design software. Despite this, I thought I could improve in free hand drawing as it can be a useful, quick tool to jot ideas down. This was still in early stages of the process, so we spent the time leading up to the Christmas break sketching and producing mood boards.







My Welding attempt

One of our early suggestions was incorporating Welding into the construction process as an opportunity to develop a new skill. At the University we have access to MIG Welding equipment. MIG stands for Metal Inert Gas – this is a welding process wherein a continuous wire electrode is fed through the welding gun. An electric gas melts the wire to form a liquid that once cooled, is solid. Other key components include a shielding gas (usually Argon, CO2 or a mix) and a power source which provides constant voltage. Other welding types include TIG (tungsten Inert Gas) which uses a non-consumable tungsten electrode and separate filler rod. Another common welding type is Stick (Shielded Metal Arc) which is used outdoors with flux-coated rods that create slag (this is a hard non-metallic layer that forms which protects the molten weld pool from contamination and impurities) this layer can be removed after cooling.

Here are my notes from our welding session:

- There are 3 dials on the back of the generator, the bottom right dial is for switching on the power. The top right dial is for controlling the speed of which the wire is fed through the welding gun
- When using thin metal, you want to reduce the temperature down to a lower heat as this will stop the wire from breaking easily
- Whereas for thicker wire, you crank the heat up so it can be melted effectively
- The top left dial is for spot welding sheet metal, this function will cut out after a certain amount of seconds
- Spot welding in the process of joining two metal sheets together without a filler material by applying pressure and an electrical current to both sheets of metal

Argon Gas cannister



Dials on the generator



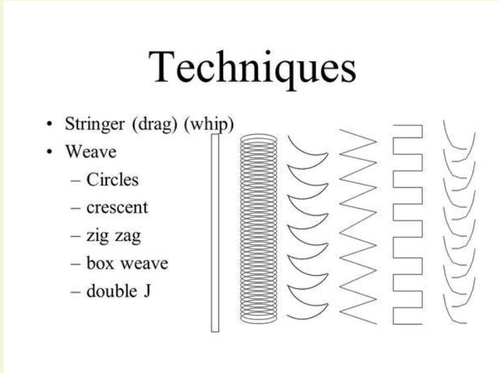
Cooper- coated steel wire



For our welding, we used the SIP AUTOPLUS 180ST-MIG, a wheel-mounted MIG welder suitable for gas or gasless use, ideal for automotive and light industrial work. Gas MIG welding uses a separate gas cylinder for protection, whereas gasless MIG welding uses flux-cored wire that creates its own protective gas, making it better for outdoor work because wind cannot easily blow away the shielding protection.

My Welding attempt

- The process of welding gives off harmful gasses. For this, we use air-fed masks. These filter the air and extract the harmful gases
- After the welding session, I looked into the harmful gases we are exposed to when practicing MIG welding:
- Ozone (O_3): Very dangerous, formed when UV light from the arc reacts with oxygen
- Nitrogen Oxides (NOx): Created by heat + nitrogen + oxygen in air.
- Carbon Monoxide (CO): Deadly in enclosed spaces, comes from CO_2 shielding gas breaking down in the arc.
- This is why we wore protective equipment – a mask with a ventilator and air purifier with auto-darkening abilities. And our steel cap boots which are heat resistant, overalls for an extra protective layer of clothing and heat-proof gloves.
- We were taught different application methods like using a zigzag shape or a crescent pattern. You can also work ‘uphill’ or ‘downhill’ this is the direction of your weld and is used to describe whether you are using a pushing or pulling technique.
- When metal is welded, the join becomes stronger than the metal itself



Explanation of Arc Welding Techniques and Methods
Megmeet Welding Technology (2024)



Our air purifying safety wear



When welding an L shape, you weld a small point at the top and bottom of the join first, then make a line between the two

My Welding attempt

From a design point of view, welding could be applied for a structural or aesthetic purpose. After Cam, Alaya, Sarah and I had our welding sessions, we had a discussion about our experience. There were some concerns about delivering a professional set piece using welding, as we felt we would need a lot more practice. We still brainstormed a metal design for the Gazebo as it's interesting to explore the advantages and disadvantages of a new material.



Extraction fan designed to capture and remove hazardous fumes

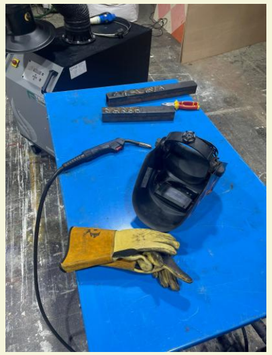


Daves welding demo

Here I am attempting to write my name







Daves PPE equipment – heat resistant gloves and welding helmet



These are my first few attempts at welding



Cam and I's names that we welded, trying different welding patterns

The Design Museum

Over the Christmas break, I went to the Design Museum in South Kensington for the Wes Anderson: The Archives Exhibition.
One of my (and many peoples, rightfully so) favourite all time directors is Wes Anderson and one of my all-time favourite films is Moonlight Kingdom (2012) (I even once made a Halloween costume for me and my friend to go as the lead characters.)

What has this got to do with the Sound of Music? Nothing really but I went to the Design Museum – and its in the name! Here are some pictures I took in the exhibition.

















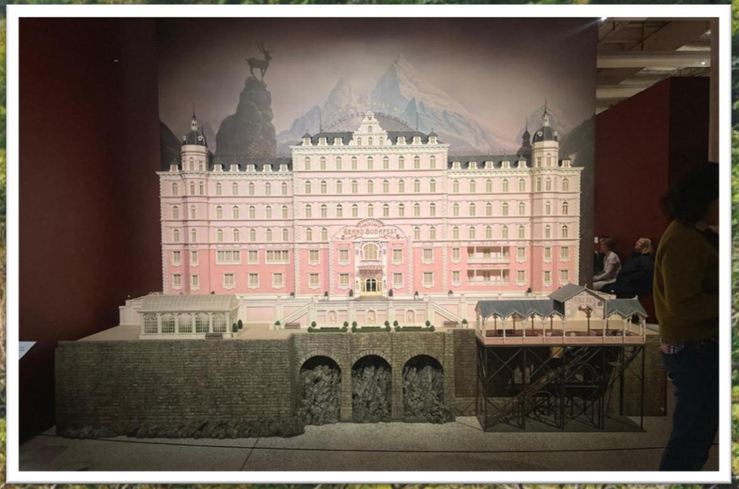
The Design Museum

Wes Anderson’s personal archives, built up over three decades, are being displayed in the exhibition. This is the first time many of these objects are being shown in Britain, though I have been to a similar exhibition at 180s Studios a few years a go to see the work that went into The French Dispatch (2021).
The exhibition shows the development of Wes Anderson’s films, from early experimental filmmaking in the 1990s to more recent work, as well as his collaborations with long-term creative partners. I got an insight into the design processes behind well-known films such as The Grand Budapest Hotel, The Royal Tenenbaums, Moonrise Kingdom, The Wonderful Story of Henry Sugar, Fantastic Mr. Fox and Isle of Dogs.

The exhibition shows how Anderson’s distinctive style and attention to detail have shaped some of the most visually and emotionally engaging films of recent times. Over 700 objects are brought together, showing the director’s careful approach to filmmaking through original storyboards, polaroids, sketches, paintings, handwritten notebooks, puppets, miniature models, and costumes.

Alongside finished props and sets, the exhibition also includes work-in-progress materials and maquettes, giving insight into the traditional, hand-made filmmaking techniques Anderson continues to value. There is a particular focus on puppetry and stop-motion animation, highlighting the skill involved in these processes.

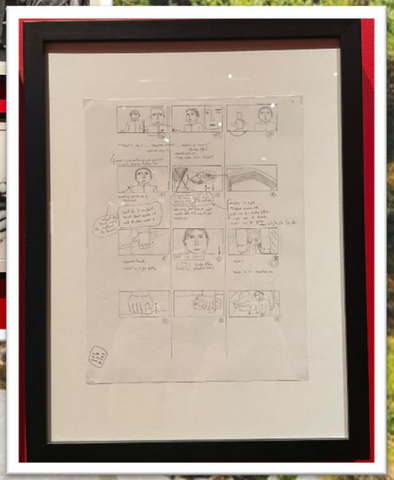














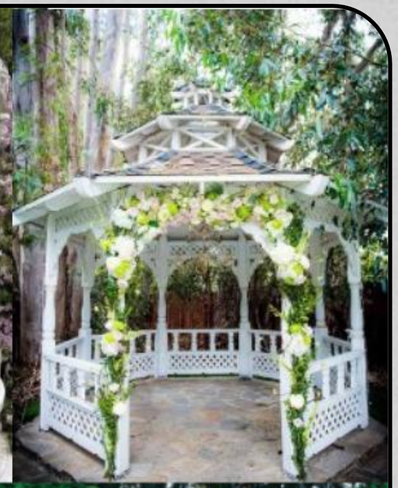
Implementation

Group mood boards
Next as a group, we began putting together mood boards for our three key ideas; a wooden bandstand, metal garden structure and stone gazebo. Before Christmas we agreed we would have these complete.

During and after the break, some of us made sketches on the ideas we felt the most inspired by. We sent the three refined mood boards with our sketches for Mike to see on the 9th of January to review ahead of our meeting with him and the director on the 13th. At this point in the process, we were undecided about how the Gazebo will go together and which material to use. we thought we could start with designing our gazebo's appearance, then figure out the technicalities of it later. We will need to consider how many benches we want to use and how these will be secure. This could depend on how the Gazebo is split up – into 2 or 3 parts and what Mike thinks, we could ask how many benches they are rehearsing on and if he has a preference. The following Mood boards were our first as a group for the wooden, stone and metal gazebo that we put together before the Christmas break as an initial collection of ideas.

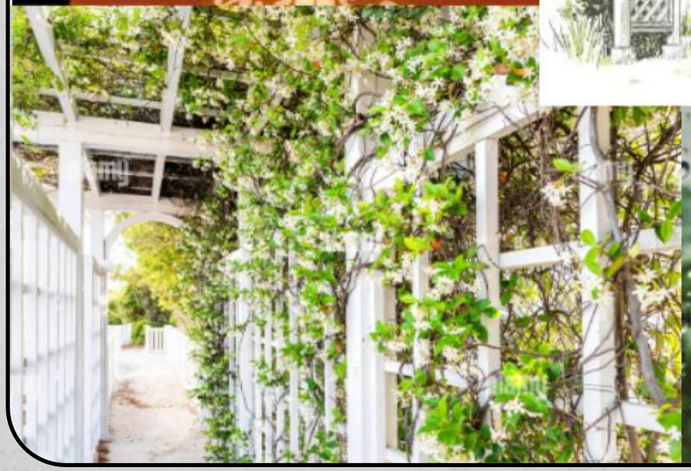




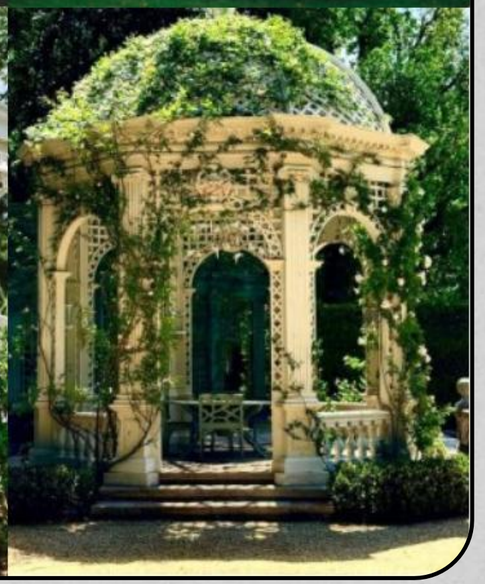



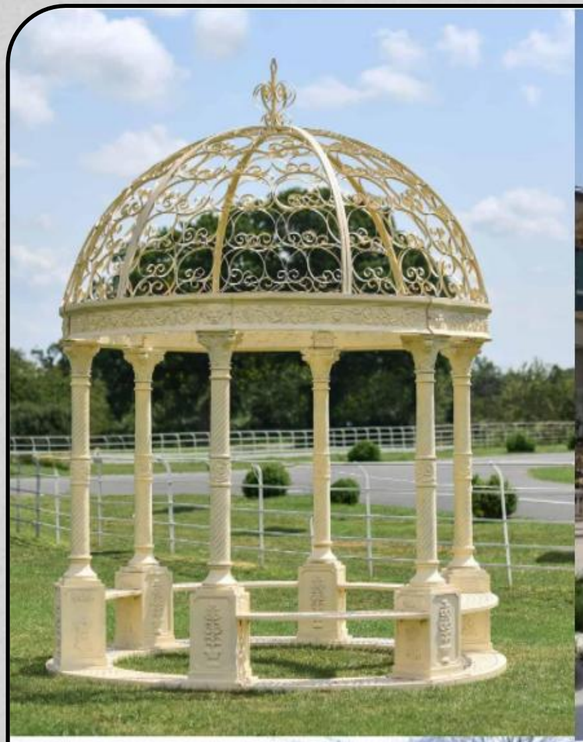




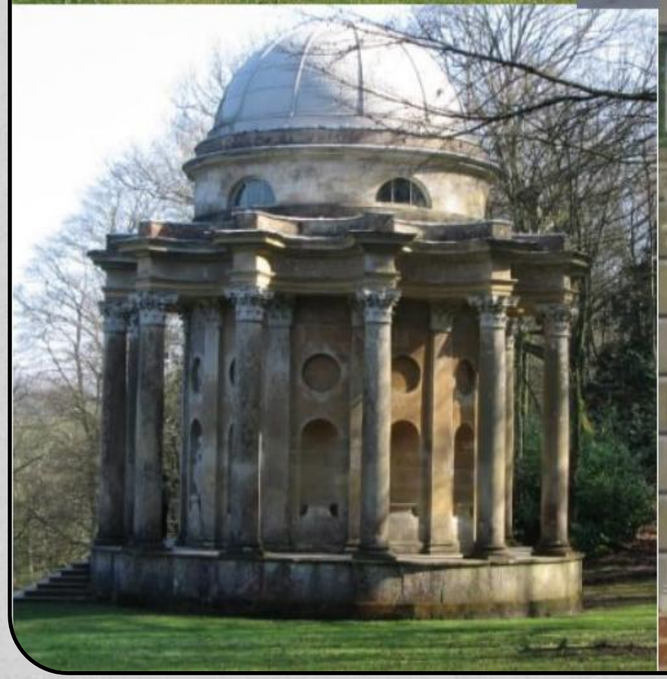




















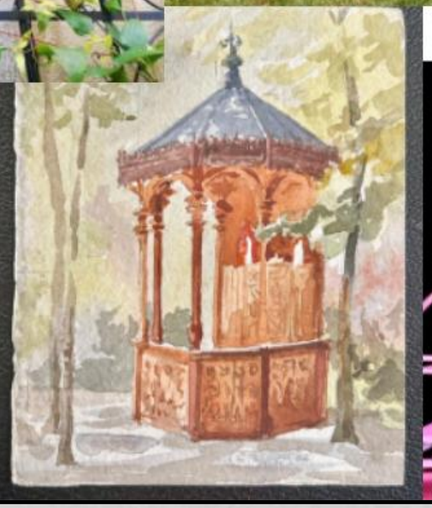













Incubation

The following mood boards were created as a group after the Christmas break, following a period of incubation and to show and pitch to Mike our possible ideas and sketches. Incubation, for me, meant rewatching the film and looking at real-life examples of gazebos and other outdoor furniture in parks and on walks. I wasn't actively thinking about the project the whole time, as I wanted to take a break, but I let it sit in the back of my mind. Whenever I came across something inspiring, I'd take a picture and a moment to consider what elements I liked or disliked and whether any of them could be incorporated into our design.

In terms of our metal Gazebo, I felt inspired by our garden furniture at home which could be described as Victorian Cast Iron. They include ornate designs of romantic florals and vines. I like how the organic references are part of the material itself. This could also be wooden filigrees or stone carvings, depending on what material we end up using.





Our garden furniture at home

Another example I looked at was one I came across in Vondelpark, Amsterdam. It was a very striking scene as I had come across it at golden hour and the light off the frozen lake was beaming at surrounding buildings. I very much liked the thinness of the columns and different colours of emerald, blue-grey and beige - it's a very elegant and romantic design. It's called the 'Muziekten' or Music Tent and was designed by Jan David Zocher and Louis Paul Zocher and built in 1873.

Musiekten, Amsterdam



Lastly, on a stroll about a 25-minute drive from home in Reigate, I knew I would find an example of a stone Gazebo. The stone structure is known as The Inglis Memorial, it was donated in 1909 by Lieutenant Colonel Sir Robert William Inglis to the Borough of Reigate, originally serving as a drinking fountain for horses. Located on Colley Hill just east of Reigate Hill, it is now a popular scenic resting spot for hikers, with views across Surrey and towards the South Downs. I like its simple design and alternative idea for bench placement, allowing people to look out rather than face in.



The Inglis Memorial, Reigate

Option 1 Wood:



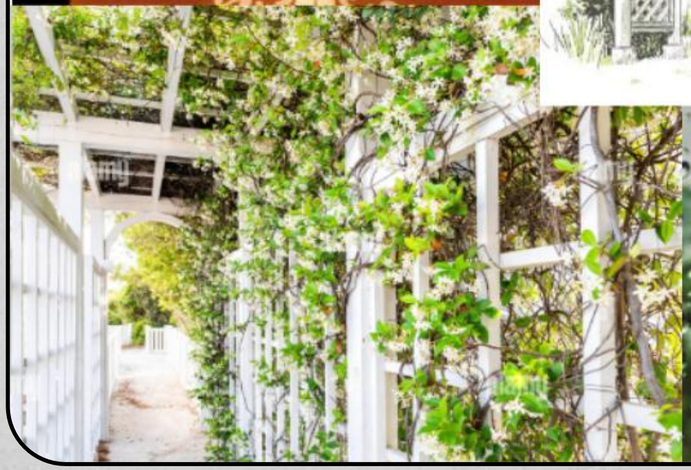








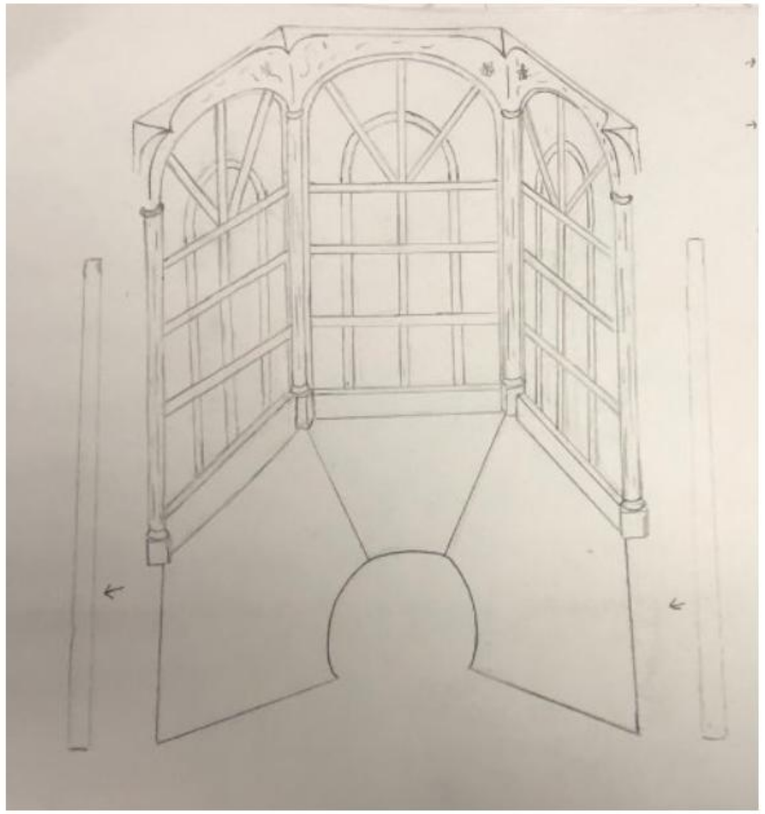








Option 1 Sketches:



Option 2 Stone :



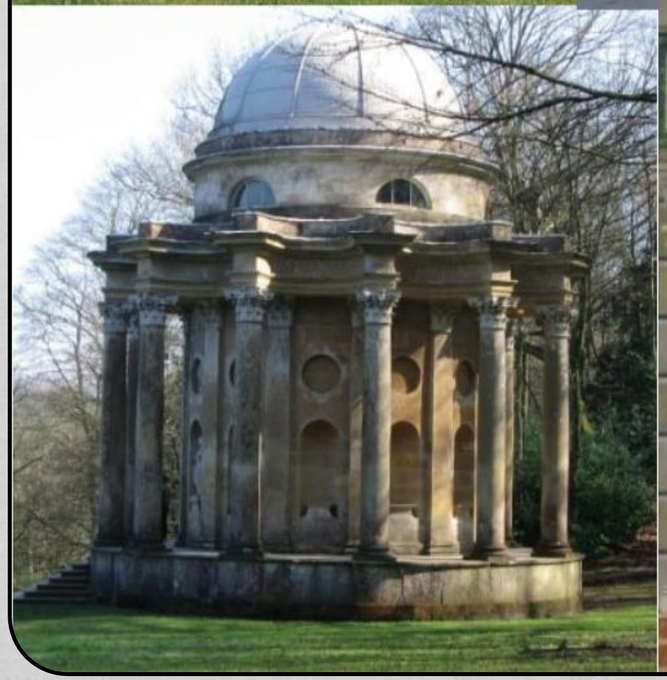












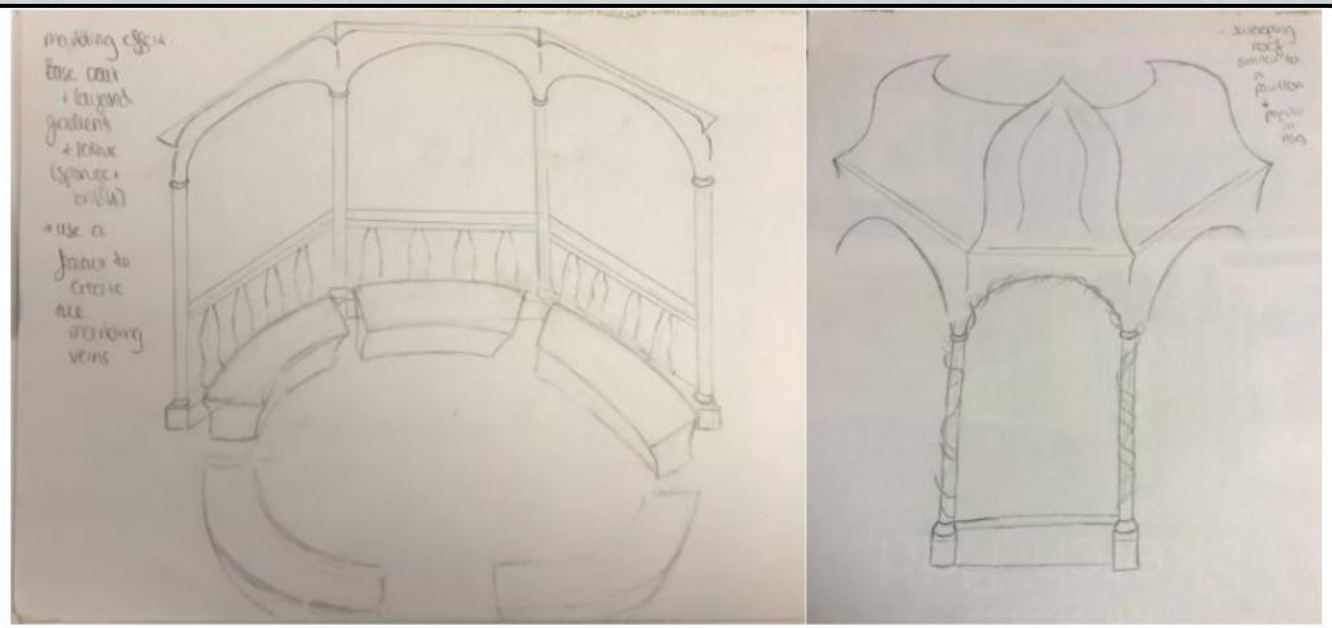


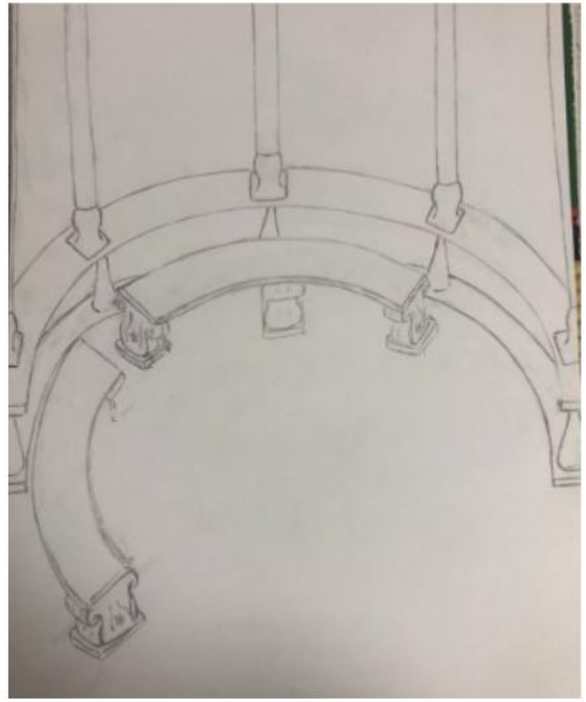






Option 2 Sketches:





Option 3 Metal :





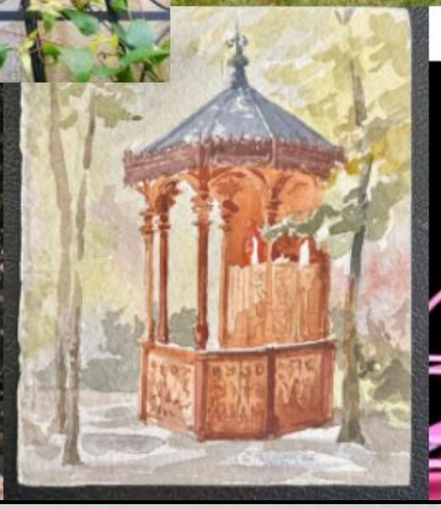






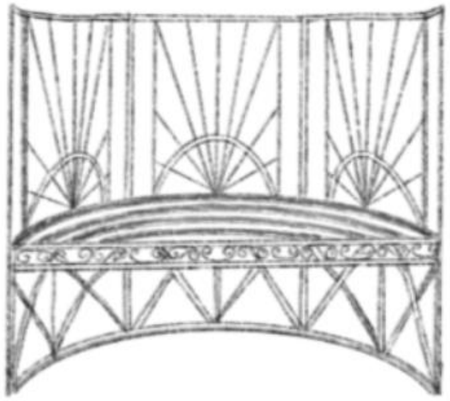




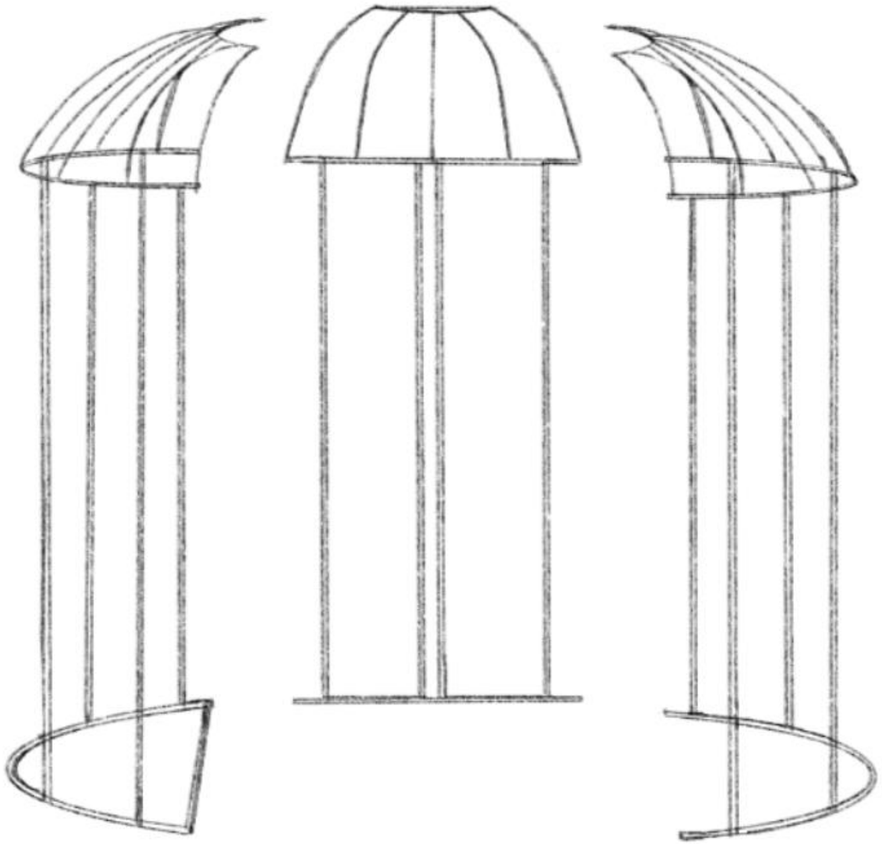




Option 3 Sketches:

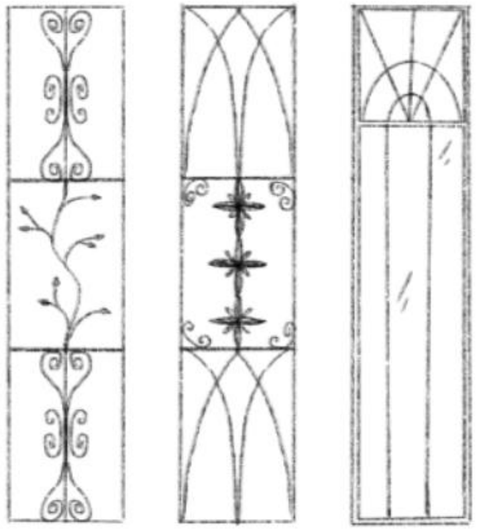


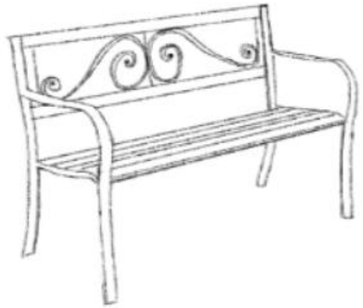


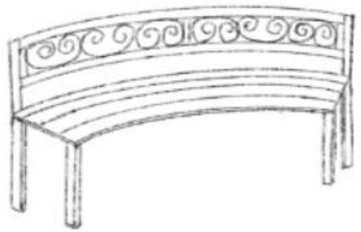
Split into three pieces, two of which are self-supporting semi-circle shapes and the back structure supported by braces



Panel design ideas, could be all metal detailing or could include glass panes









Bench options

1. Benches built into the three Gazebo pieces
2. Straight benches that are separate to the Gazebo pieces that go between them
3. Rounded benches that are separate to the structure and go within the Gazebo pieces



Could add colour by adding Ivy, Dogwood, Yarrow and/or Edelweiss

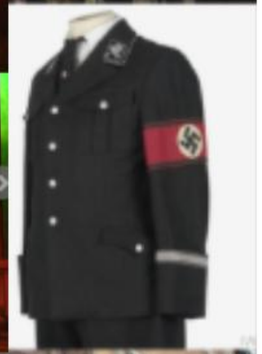
Banners:

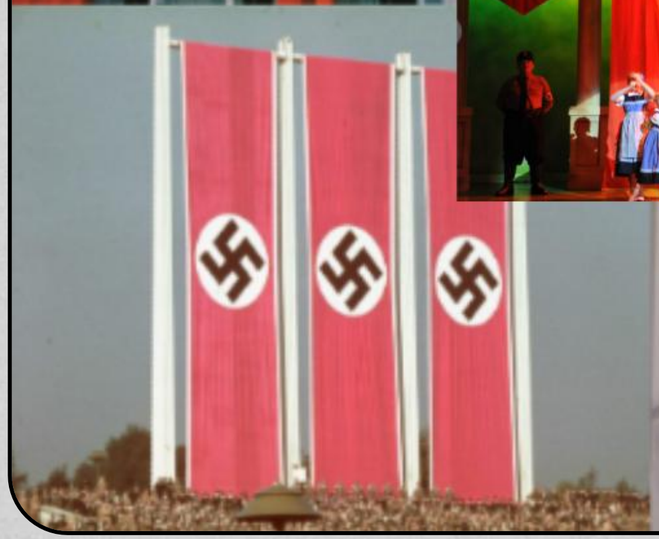


















Dimensions of banners
2x to go on Villa tabs -
Total height of Villa structue = 14 feet
Banners height of 10 feet x width of bolt of fabric approx 1m (3.3 feet)

1x larger Banner -
can be the same height of 10 feet or slightly shorter ie 8 feet. If wanting a wider back banner than the toher two, this could be 10 by 8 feet
Total visible length of stage (24 feet)

For a banner that can rip in half -
A standard size flag of 3x5 feet made of two pieces of fabric overlapped with velcro (for a good sound effect) or magnet tape so it can be ripped down the middle and reset

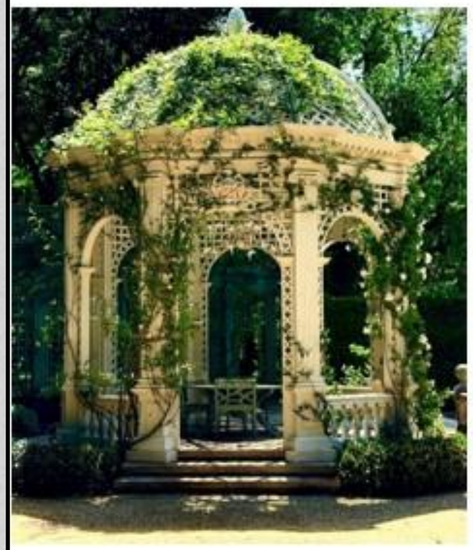
Implementation

For these mood boards, we were asked by Dave to create a combined document with references for the Bridge, Gazebo, Birch Trees and Banners to send to Mike. I worked on the sketches for the Metal Gazebo, although it was the least favoured option by our group, I felt the most inspired by the endless possibilities of shapes and style. Starting with a bare base of thin metal poles, I thought about how different shapes within the panels could be implemented with references to The Sound of Music – shapes of Edelweiss, mountains and hilltops, and swirling heart patterns. Alternatively, as shown in my mood board for the metal proposal, glass panels could be added which closely ties in with the film and Strictly Come Dancing references that Mike gave us, and opens up the opportunity to add rain drops to the design. We wanted to give Mike the weekend to review the mood boards ahead of our production meeting with him so as a class, set a deadline for the Friday Afternoon. Unfortunately. there were some technical difficulties within our group which meant not everyone was able to add their sketches in time, only mine and Cams were on the combined document that got sent to Mike, hence the blank spaces on some of our slides. As well as the Metal Gazebo mood board and sketches, I put together a rough pitch for the Swastika Banners with possible dimensions and materials to offer to Mike to check they align with his ideas for the Kaltzberg Musical Festival scene, as shown in the previous slide.

The following week, we received some feedback ahead of our meeting on how to refine our mood boards - where there isn't text, add some to contextualise your references. As well as this, always refer back to the brief, think about what you are being asked to produce and make sure to demonstrate how you've done this. As a good example of this, Alaya's sketches included the backdrops by Proscenium so you could see how her designs fit into The Sound of Music scenery. My sketches already had some text on them as I had created multiple bench and panel design ideas and wanted to caption this to show I wasn't proposing every sketch as part of one design. For the refined mood boards, we were able to add in Alaya and Ant's sketches

After we had refined our mood boards, we printed out our two favoured designs ideas - the Stone and Wooden ones. As advised, we were told to present less options to the director to make their job easier. Also, you must make sure to present the ideas you'd be happy and feel confident to produce and answer any queries on within the meeting. Back up any design choices with references to the material and brief given to you. The following slides are our improved mood boards that we prepared for the production meeting, including Alaya's wooden gazebo sketches and Ant's stone gazebo sketches.

Wooden Gazebo:







Most accurate to The Sound of Music (1965)



Overgrown with ivy/foliage to show its not been used since his Wife died. Also adds visual interest to the gazebo



Opportunity for traditional folk art/ wood carvings that would've been used in 1930s Austria. Added detail and flower language symbolism

















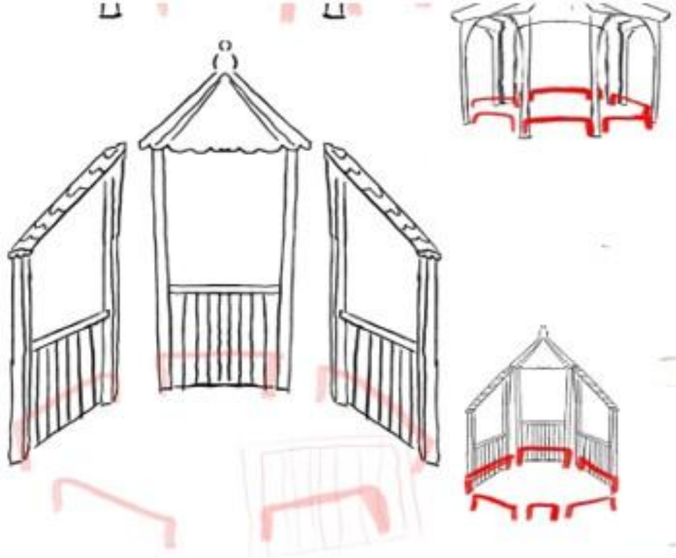




Possible raindrop effect on windows if we have "glass" or do we want it open with no "glass"?

Decorative, White painted wood, Garden, Recognizable, Greenery, Tall, Panels, Angular

Wooden Gazebo Sketches:







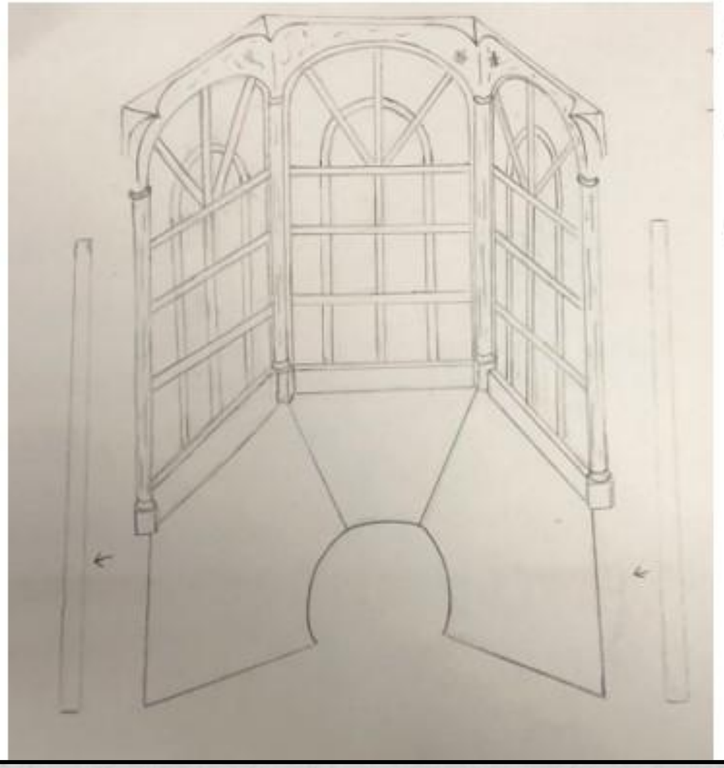


- Fencing around the base
- Implication of a roof
- Three sections









- Panelling similar to the Gazebo in the movie
- Connected to a base on the floor
- Columns to match exterior of house



- Two sides have a roof the centre goes up to suggest the roof continues round
- Arch shaped cut outs to keep it open



Stone Gazebo:





Columns to link to the outside of the VonTrapp family house. Shows grandeur and wealth

A circular base is common with stone gazebos







Carved Sandstone details, created by carving into styrofoam and a jesomite sandstone finish. (this finish will also help make the benches grippy for stage hands





Stone benches would make it easier to create a bench stable enough for the actors to jump and dance on safely



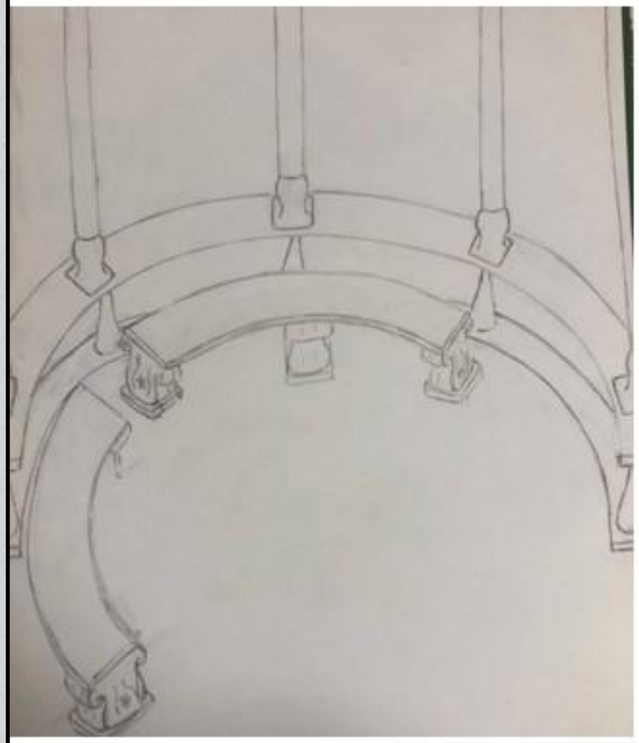


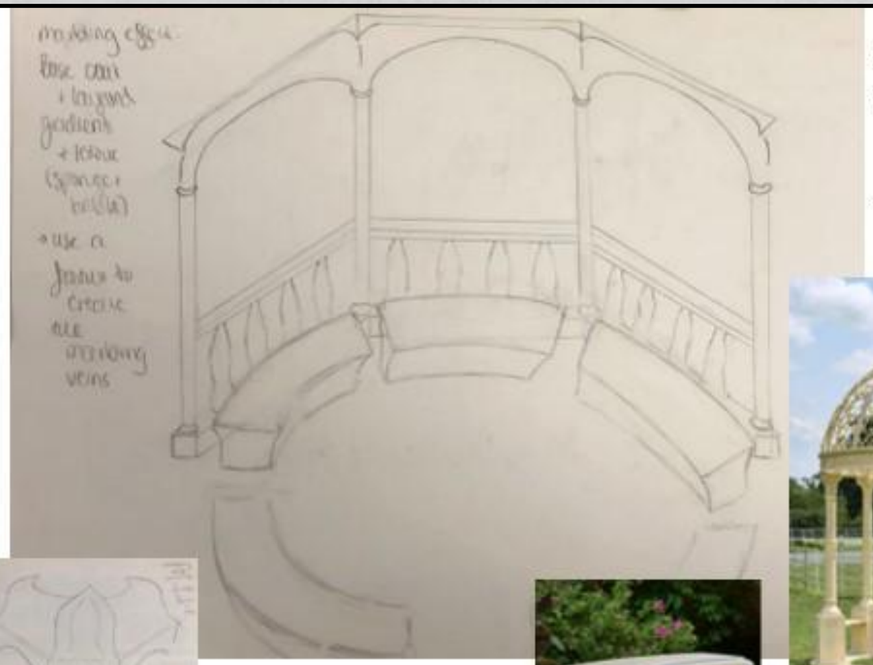




Grand, Solid, Traditional, Carvings, Sculptures, Marble, Sandstone

Stone Gazebo:





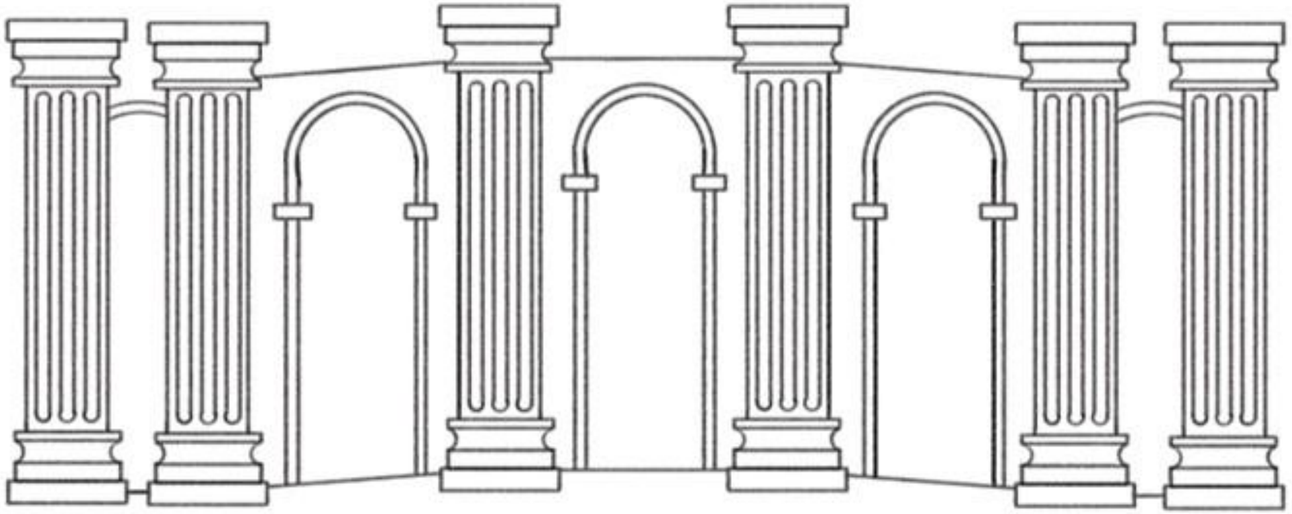












- Two Parts that make up a semi circle
- Roman baroque inspired, design links to the Exterior of the house
- Curved benches that align with the walls

- One part, folds to create the angles of the gazebo
- Larger focus on colums, grander stone/marble design

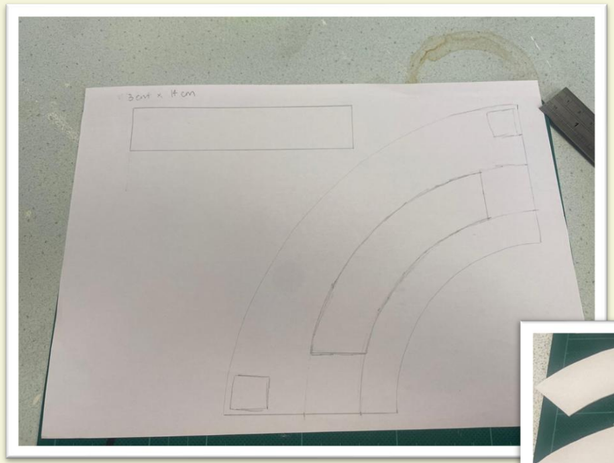
Model Making

Next, Cam and I began on a model to demonstrate a proposed scale to Mike and give both Mike and Rhian a tangible design that they can interact with to help them picture how it will look on the stage.

For this proposed scale, we were going with a width of 12 feet for the gazebo, exactly half the measurement of the width of the performance space at 24 feet, giving it an easily identifiable centre position on stage. Height-wise, we considered the size of 8-12 feet including the roof (which is the standard height for a gazebo) mostly focussing on the 10 foot end of the scale so if we did have a 6 foot something actor like last years production did, the size of the gazebo would be proportionate. I made the benches of the gazebo which we were making in a 1:10 scale. We decided to make the benches 30cm wide and 40cm tall, using a chair in the design room as reference for a standard seat height.

To make the curved benches, I marked out an 18.2cm square on a piece of white model card (the same size as the gazebo floor). Then I measured a width of 3cm (for our 30cm bench width) from one of the corners of the square running along its edge. I joined up the markings of the 3cm width using a make-shift compass by punching a hole in a piece of card and another at 18.2 in a straight line from the first punched hole (just big enough to fit a pencil tip through).

Then I did the same with a DIY-ed compass with two punched holes at 15.2cm apart to make the inner arc of the bench width. With my marking out completed, I cut the curved bench out using a craft knife. Then to create 3 more copies, so we had the option of 2 or 4 benches to show Mike, I traced the cut out 3 times and cut out these shapes.



Marking out the bench arc


My 4 model card bench cut outs

Model Making

For the legs of the bench, Cam and I tried stepping up and down from the design room chairs, these were roughly 42 cm tall, and Cam and I thought they were a good height to propose to the Production Manager. In my first attempt at making the legs of the benches, I cut out some 2x4cm rectangles then shaped these in the style of a Baroque stone baluster (shaped a bit like a typical flower vase). Then, we decided the model card wouldn't be thick enough without some foam between it, in order to save time, I decided to only use the 5mm foamboard to cut out the bench legs.

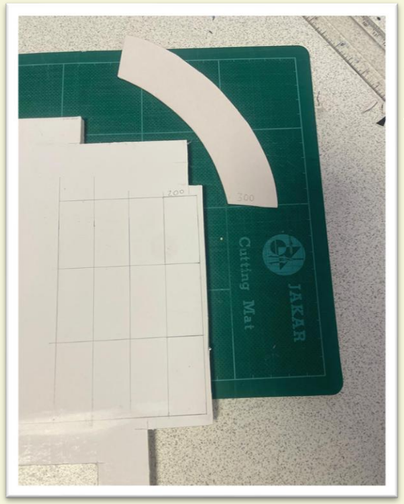
I drew up a grid on the foam board of 12 2x4cm rectangles and cut these out. I then sketched my design onto one of the rectangles and after cutting this out, traced the design onto the remaining bench legs. With the bench legs traced and cut out, I glued them to the curved bench top, with the bench legs at the ends sitting 5mm in from the edge of the bench top. I marked the centre line for the middle bench leg by measuring from the two longest points of the bench arc which was 14.8cm and halved this to find the centre point for the middle leg, 7.4cm.



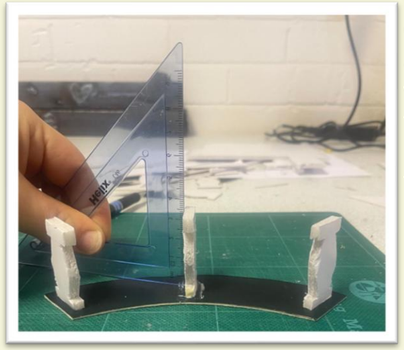
My original Baluster design on white card model



Recreating the design on foam board instead to make them thicker



Marking the 2x4cm rectangles for the balusters



Checking they are straight when sticking them to the underside of the bench

Model Making

For the poles of the Gazebo, Cam and I used a round pencil and paper to roll these into shape. We cut the correct height for the poles first of 25.8 cm (3000-420mm – the height of the Gazebo minus the height of the benches). Then rolled these and stuck them in place on top of their plinths.

As this model's purpose was to demonstrate to Mike and possibly our director, Rhian, a gazebo in a stone material, Cam added sand to the gazebo structure. We felt the benches would be a smoother limestone texture, so we didn't add sand to these, but instead painted these in a similar shade to the sand on the gazebo columns.

If we'd had more time, we would have liked to dirty down the model a bit more, but we felt it was okay to leave it as is since this was only a mock-up. For the final refined model, we'll make sure it's painted to properly reflect how we want the finished gazebo to look, with clear signs of wear and weathering, some greenery climbing up the columns, and possibly even some subtle carving details in the column supports.



Constructing the columns with rolled pieces of paper and dome carved pieces of foam board as the capital and base pieces of the columns



The completed columns, glue to the base boards





Applying a sandy beige to the benches to match the sand that was going on the rest of the model

Model Making

Our finished first model of the sandstone gazebo







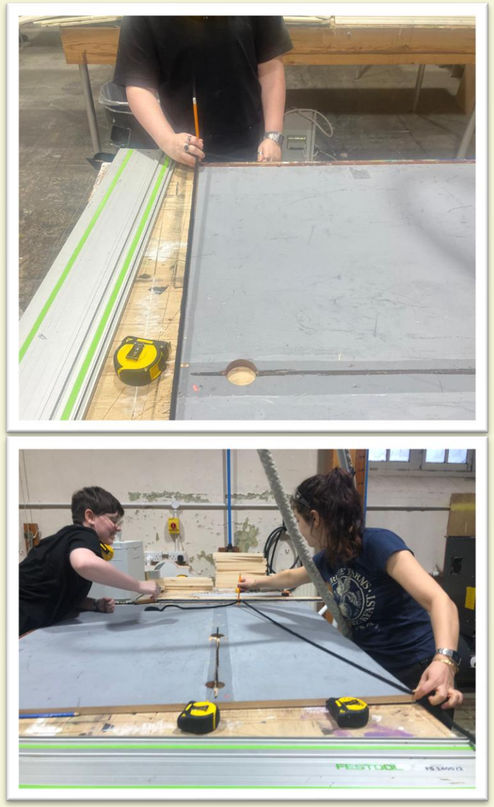
Prototype Making

Next, as part of our process in finding the correct bench dimensions in height, leg width and curvature of the bench, we built a prototype.

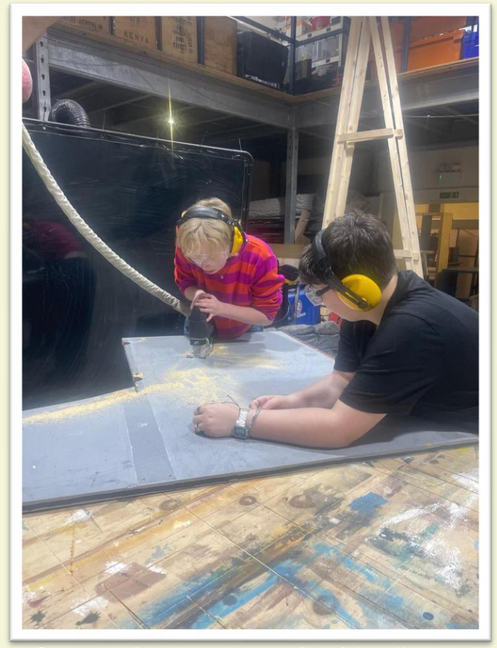
The prototype bench was made using a scrap piece of roughly 1020mm x 1400mm 18mm Ply. We want our final bench to be bigger at 1080mm^2 but we could only use the scraps we had for a quick mock up.

We rail sawed the scrap ply into a 1020mm square, as this was the largest we could make it, then marked out the bench width of 300mm using a piece of string as a make-shift compass to create the curve, much I did in the model making process. We cut out the curved bench top shape using a jigsaw and gold coloured blade – suitable for wood materials.

We constructed this prototype to check with Mike and Rhian that the benches looked suitably wide and high enough, at 40 cm high with a 30cm tread. When I made the model benches with Cam, I was worried about the benches being too thin for dancing on, this was a good way to check the size of our gazebo benches and to show Mike a physical demonstration of its size so he can consider the storage side of things. Although not quite the length we have in mind that will be within a Gazebo of a total of 12 feet in diameter, this was a good visual representation of our design.



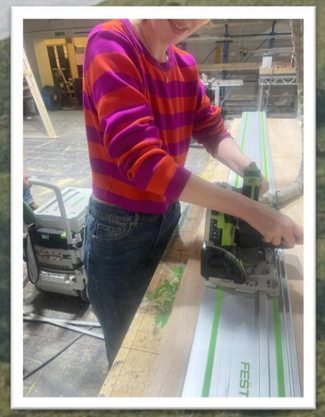
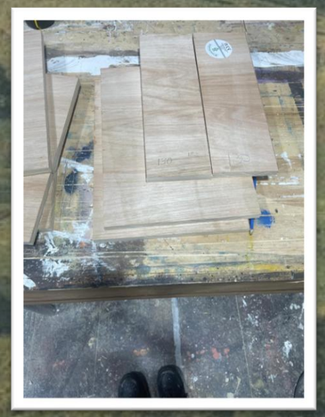
Using a piece of string as a makes-shift compass



Cam cutting the 18mm ply with a Jigsaw

Prototype Making

We made our bench legs in three different widths to see which looked best aesthetically whilst also supplying enough support to the bench and the performers. These were also made from 18mm ply in 300x400mm rectangles with varying widths of ply between them to make different widths of bench leg: the smallest using a piece of 3x1 using the 3 inch (roughly 75mm) side as the side to the bench leg making it a total of approximately 105mm wide. Then, we cut out two widths of 100mm out of the 18mm ply for the mid-sized bench leg at 135mm width total. Lastly, we cut two widths of 130mm for the widest bench leg at 165mm total. These were screwed together in a box formation to make the legs using 3.5mm x 40mm screws. These were secured to the underside of the bench with the thinnest and widest legs 8cm in from the straight edges of the bench top. We found the midpoint for the midsized bench leg using the cut out of our curved bench, piecing back together the 1020mm square and drawing a straight diagonal from one corner of the square, to the opposite one to find the centre line on the bench. When testing the completed prototype, we found the bench could rock if someone stood on the very edge of the bench, where it was unsupported. To rectify this, we decided in our refined design we would have the bench legs sat flush to the straight edges of the bench. We also thought the thicker the bench leg the better in terms of adding plenty of structural support, and this element didn't affect the look of the Gazebo aesthetically, and if anything looked proportionate in relation to the planned height we have for the gazebo columns.




Prototype Making

The finished Prototype, ready to show Mike at our production meeting











Meeting Questions

Lastly, before the meeting with Mike, we created a list of questions we had to ask him:

Q. Is there a max size the Gazebo structure(s) can be to fit in the wings/available storage space – considering the size of other prop and set pieces that will be kept there?

A. He will send Dave a CAD drawing with details for the wing space. We will have to think cleverly about how to take up as little room as possible i.e. not having a wide base for ease of storage

Q. Which of the backdrops by Proscenium will the Gazebo be used with (Act 1, Scene 6, p32 and Act 2, Scene 1, p90) – for colour and texture references?

A. It will be used for '*Sixteen Going On Seventeen*' in front of the Villa Exterior backdrop and next used with a black backdrop lit by 'moon light' for Act 2 scene 1. For Act 1, Scene 6, the benches will be danced on by Liesl and Rolf, for Act 2, Scene 1, Maria and the Captain won't be interacting with the Gazebo itself, but it will be placed around them.

Q. Does he (and Rhian our director, if she joins us) like the idea of glass panels?

A. Rhian liked the romantic look of the overgrown sandstone Gazebo, there won't be any glass panelling in the stone Gazebo but we can use greenery to dress it

Q. Do they require a full circle of benches as in a real Gazebo, or just a semi-circle?

A. A semicircle is good – they are rehearsing with 3 benches positioned in an arc shape

Q. Which of the design proposals do you like – Sandstone or wood and tapered or not?

A. They like the flat roof sand stone proposal

Q. What are the height of the actors interacting with the Gazebo?

A. Liesl and Rolf aren't taller than 5'7'', the tallest actor is playing the Captain but he doesn't need enough space to stand on the benches as Liesl and Rolf do. As long as Maria and the Captain (who is roughly 6') fit in the Gazebo stood up, that's fine.

Production Meeting No. 2

On the 13th of January, we had a meeting with PM Mike Rogers and Director Rhian Holdsworth to show them our design proposals. We had two scale models, the prototype with varying bench leg widths and two mood boards with reference images to present to them. These are the notes I took from our discussion:

- Firstly, Mike asked us for a list of names and emails for a DBS Check for those who want to be involved in the show week. We later put together a clear list of names and where we'd like to help. I have very limited theatre experience, having only worked on and had work experience in the design side of the production process, so I am interested in the role of a stage hand, working beneath the SM and ASMs to see them at work. I have also said I am happy to work in tech as that is also an element I am interested in – I am sure there will be help needed across every department so I am happy to help where it is needed (just not so much Hair and Make Up.)
- Mike went over his key concerns, that the Gazebo can be put together quickly, that it fits in the limited (and unknown amount of) storage space and that it is secure enough for Liesl and Rolf to dance on – no pressure for Team Gazebo then.
- The colours of the set are beige, white and green, so it will be nice with the use of foliage to incorporate a bit of colour.

Trees

- The Trees will be approx. 100mm diameter made from PVC (plumbing) piping.
- It will be 12 year olds in the junior ensemble that will be interacting with the trees as part of a dance.
- They will be kneeling for part of it and will need to be able to easily carry and hold them – hence the need for handles.
- They can be 8 foot hight with an absolute max of 9 feet (which may be too tall)
- The PVC pipes we will order come in quantities of 3 metres or 10 foot

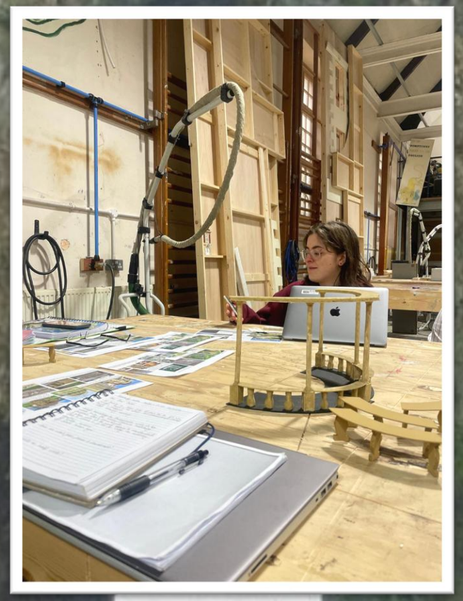
Gazebo

- The Gazebo will go centre stage
- They are currently rehearsing with the benches in a semi circle shape, but they are open to making adjustments according to our design.
- Rhian wants the Gazebo to look 'romantic'. How we achieve this is up to us, we want to create an intimate space.
- We put forward the stone idea that Cam and my model represents – and how we could add floral elements in stone carvings and climbing greenery which she liked
- The idea that the Gazebo has stood untouched since the Captain's wife's passing and is now overgrown

Production Meeting No. 2

Lastly, to confirm I asked Rhian to go over the decisions made in the meeting around the Gazebo:

- The set can be in two parts despite Mikes original thoughts that it could be in 3 parts
- They like the idea of the benches being attached to the Gazebo structure, so we get rid of the separate benches and make the railing of the gazebo, into a wider surface area to become the bench, with allowance for Liesl to walk around the pillars that will also be attached to the bench
- We will go with the stone idea with no glass paneling
- The Gazebo will be between 10-12 foot tall – we know now one of the actors using the Gazebo who plays the Captain is 6 foot – but he doesn't interact with the benches, he only needs to fit (with plenty of lee-way) into the Gazebo
- There will be no sperate benches just the ones that are built into the Gazebo's structure – we may still make an extra bench so they have the choice of using it to extend the size of the gazebo or as a way to unify the 2 sperate set parts

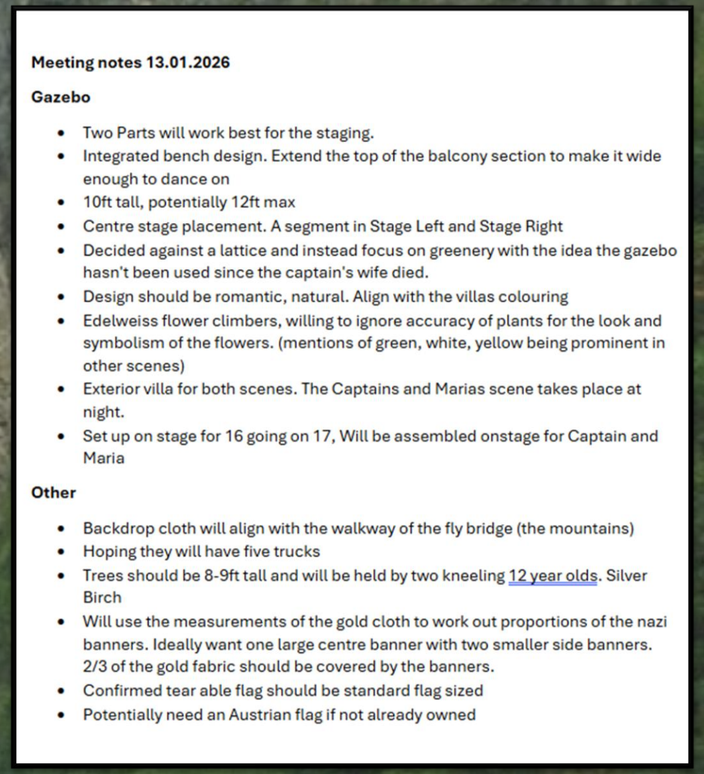




Production Meeting No. 2

After our meeting, Alaya typed up the meeting minutes, which were later combined with the Bridge Group's notes. Creating a formal, dated document and circulating it after each meeting is a good habit, as it provides a clear paper trail of agreements and decisions made. If any confusion arises later, the meeting minutes can be referred back to. They can also help protect you from liability if a mistake is made during production, as the notes can be used to show when and how a decision was made.

Also after the meeting, we had a class discussion about how we thought the production meeting went. We discussed the importance of using the appropriate creative language to make sure you're on the same page with who you are pitching your idea to. You can be prepared to alter the words you use to who you are speaking to and consider elements like – how long have they been involved in the production so far? And – do they have the same definitions in their mind as you do? When Annie, Mary and Anne were discussing their bridge model, there was some confusion from Rhian about the hand-rail, this was nobody's fault, but Rhian might have pictured a bright yellow accessibility hand-rail, when really Annie, Mary and Anne were only referring to the sides of the bridge which will act as the hand-rail but be decorated the same as the rest of the bridge structure. I myself got a but confused by Mikes question about Cam and I's model, he asked if the benches were integral to the design – I thought he meant integral like important, and I thought to myself of course they are, what will they dance on!? When really he was asking if the benches were fixed to a base on the structure and integral as in part of the Gazebo – my bad. To summarise, remember to keep communication clear, use universal language to include everyone and use visuals to help aid your explanations. I am sure a lot of people can relate to being in an entry level position and everyone around you using alien jargon or acronyms, I know I can – being taught a 10-2 in filmmaking isn't as fancy as it sounds – it means a longer bathroom break (as in taking a number 2).



Meeting notes 13.01.2026

Gazebo

- Two Parts will work best for the staging.
- Integrated bench design. Extend the top of the balcony section to make it wide enough to dance on
- 10ft tall, potentially 12ft max
- Centre stage placement. A segment in Stage Left and Stage Right
- Decided against a lattice and instead focus on greenery with the idea the gazebo hasn't been used since the captain's wife died.
- Design should be romantic, natural. Align with the villas colouring
- Edelweiss flower climbers, willing to ignore accuracy of plants for the look and symbolism of the flowers. (mentions of green, white, yellow being prominent in other scenes)
- Exterior villa for both scenes. The Captains and Marias scene takes place at night.
- Set up on stage for 16 going on 17, Will be assembled onstage for Captain and Maria

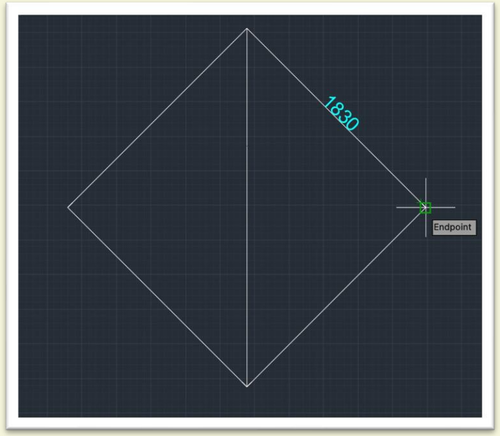
Other

- Backdrop cloth will align with the walkway of the fly bridge (the mountains)
- Hoping they will have five trucks
- Trees should be 8-9ft tall and will be held by two kneeling 12 year olds. Silver Birch
- Will use the measurements of the gold cloth to work out proportions of the nazi banners. Ideally want one large centre banner with two smaller side banners. 2/3 of the gold fabric should be covered by the banners.
- Confirmed tear able flag should be standard flag sized
- Potentially need an Austrian flag if not already owned

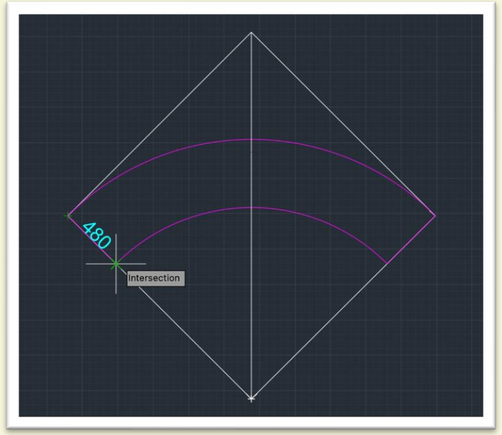
CAD

After the meeting, as Cam and Alaya worked on the refined white card model with integral benches, I made the CAD drawing to assist us in our construction phase. I began with one of the two 6 foot long structures to duplicate then flip as the other half of the Gazebo. Firstly, I drew a plan view, making a 1830mm square (roughly 6 foot in mm) and then marked out the width of the gazebo floor from the top left corner down the side of the square which was 480mm. I then drew a circle from the bottom left of the square (the arc's midpoint) to a radius of 1830mm to form the outer arc of the Gazebo floor.

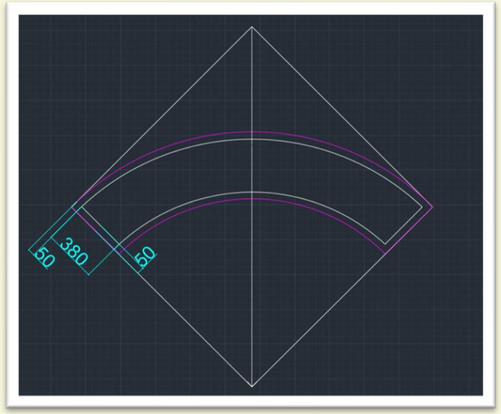
Then, I created another circle from the midpoint to the measurement made inward of the outer arc at 480mm to create the inner arc of the gazebo floor. The benches are positioned 50mm in from either side of the curved and straight edges and have a 380mm width, I added the bench in a similar way, drawing a circle to its radius from the mid point. Next, I drew the ceiling of the Gazebo structure which sits flush to the edge of the gazebo floor but is 240mm wide, also using the circle tool.



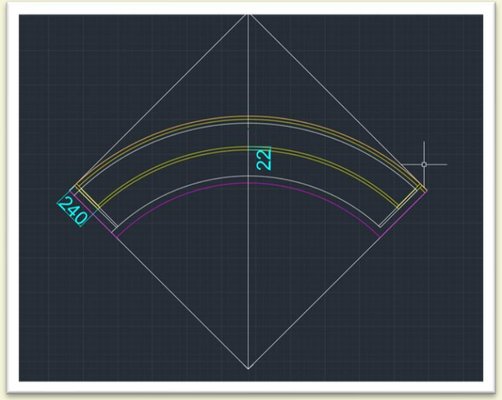
1830mm square with centre line



The 480mm width base layer



Marking out the 380mm wide bench, placed 50mm in from the edges of the base layer



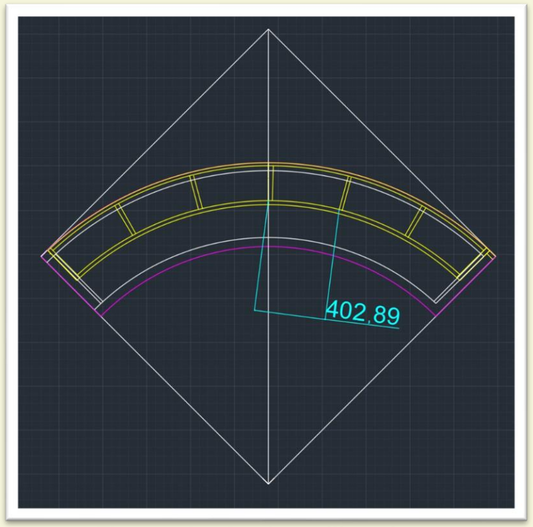
Adding the 240mm wide ceiling layer, positioned flush to the back of the base, starting 50mm in from the straight edges of the base layer

CAD

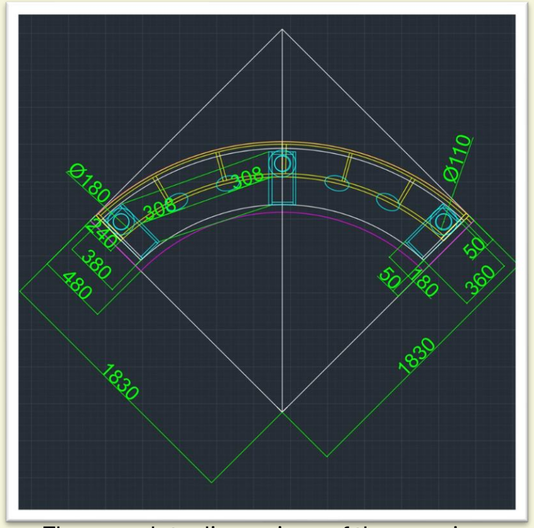
Next, within the ceiling layer, I added the rails and stiles offset by 25mm inward which is roughly the short side of a 3x1 piece of softwood which we plan to use in the making of the ceiling. Unlike the other layers, the ceiling will be made of a thinner ply material and its thickness is supplied by the 3x1 toggles, I added toggles roughly 400mm apart using the array tool. The toggles must be within 600mm of each other to serve their structural purpose, however at 500mm or 600mm distance apart, they weren't close enough to support the curvature of the ply arc. We want to make the ceiling layer from thinner ply to help make it lighter, unlike the bench and base layer which are 36mm thick (2 lots of 18mm placed on top of each other.)

Then, I drew the rectangular bench legs that will have the columns sitting inside of. These were 360mm x 180mm, following Cam's refined model. After building the prototype, we had agreed the wider the bench leg the better for the structural security of the design.

After a discussion on material orders, we decided to make the columns out of grey UV 110mm PVC piping which comes in lengths of 3m for £19 – this suited us greatly as 3m is roughly 10 foot, the height we want our gazebo to be.
During this discussion, we were asked how much our design would be altered if we were able to shrink our bench lengths to fit on a singular sheet of 8x4 foot ply.



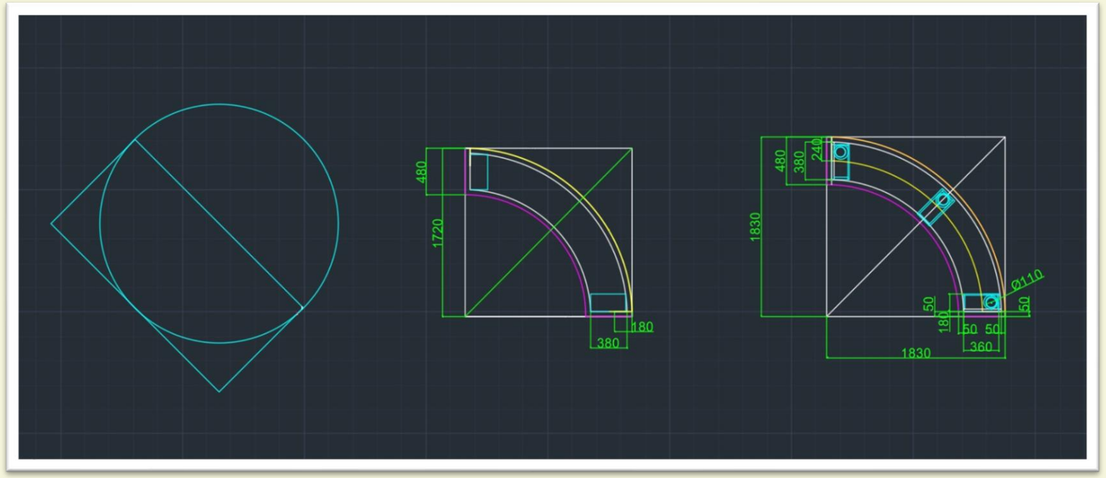
The toggles for the ceiling piece



The complete dimensions of the pan view

CAD

To work this out, I drew an 8×4 foot rectangle (2440 mm × 1220 mm), then created an arc using the circle tool at the largest possible diameter (the long edge of the rectangle) so the arc would fit within a single 8 × 4 sheet. This gave a radius of 1720 mm. Using the measurements from the original design, added the base layer at 480 mm wide, the bench layer at 360 mm wide, and finally the ceiling layer at 240 mm wide. We found that shrinking the design to fit on a single sheet of plywood meant losing a significant amount of length, reducing the structure from two builds of approximately 6 feet wide to two builds of 5 feet 6 inches. Because this would have altered the original design too much, we decided not to reduce the size. If the difference had been smaller, this could have been a good way to cut costs. In hindsight, before finalising the design, we should have considered the materials we would be using and how they are supplied. For example, we could have designed a slightly shallower arc to make better use of a single sheet.



The 8x4 ply sheet with the largest arc that can fit within it

Our design in an 1720mm^2 square

Our original design in an 1830mm^2 square

CAD

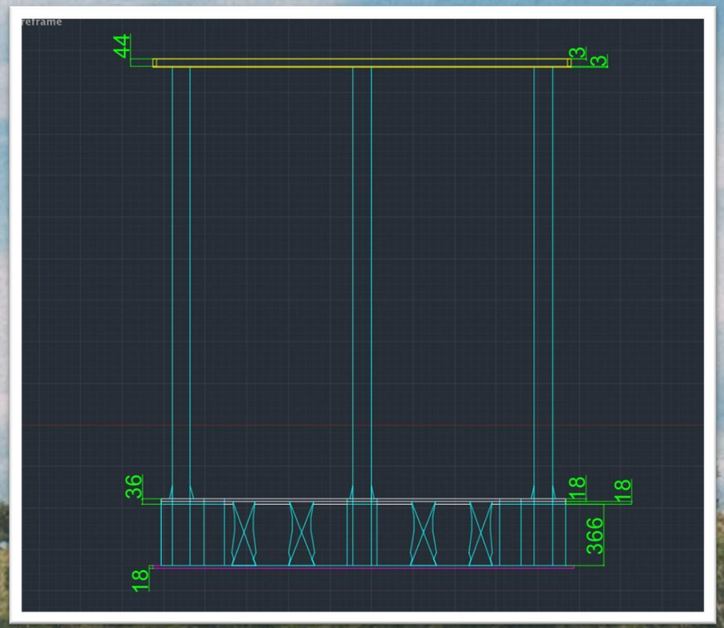
In order to draw the front facing view, we used the constructions line tool, which draws a line vertically (or horizontally) from end points within the plan view.

Using the construction lines in red, Ant and I were able to find the end points for each layer. We added in the thickness of materials in this view, including the 18mm base, 36mm bench, 366mm tall balusters and 44mm thick ceiling layer.

We still had some final decisions to make about the height of the balusters and thickness of some of the layers. We have the option to cut out parts of the underside of the 36mm thick bench layer to make it lighter, meaning the balusters would need to be slightly taller so they could support the top layer of the bench (366mm + 18mm = 384mm). We also needed to decide on whether to make the base layer 36mm as well to provide a sturdy base for our build.



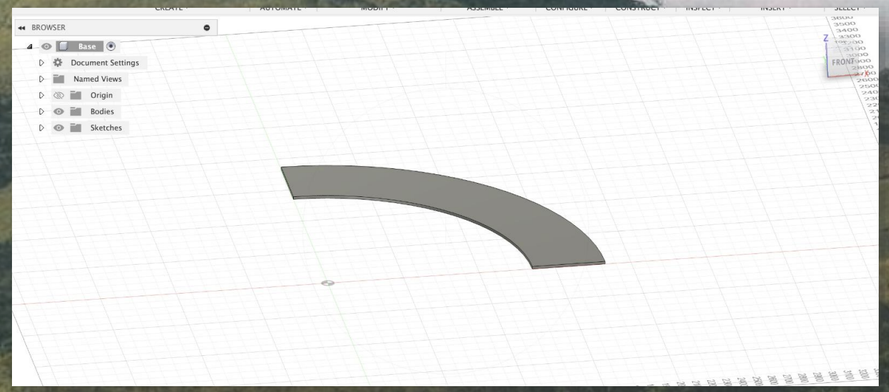
Construction lines (in red) that we can use to build a different angle of the design



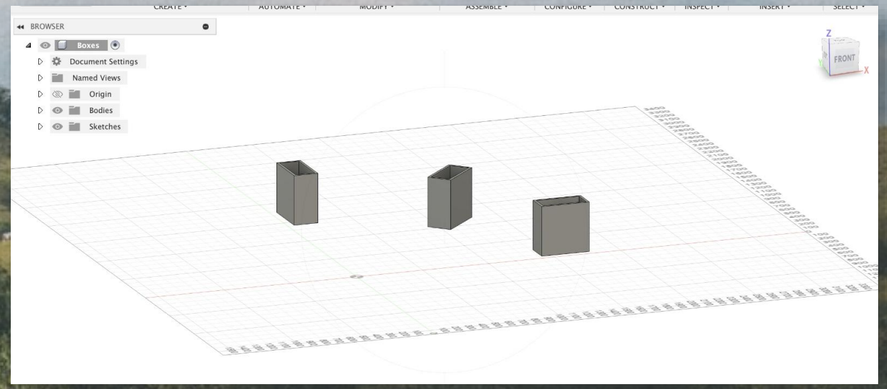
The complete front facing view with the balusters, ‘cones’ (as we referred to the top and bottom flared ends of the columns) and thickness of layers visible

Fusion

After completing the CAD drawings, Ant and I moved into Fusion to build a digital 3D model of the design. We started with the base layer by drawing a circle with a diameter of 1830mm, then creating a second circle offset 480mm inwards. After trimming the excess lines, we selected ‘Finish Sketch’ to complete the base drawing. To turn this into a three-dimensional form, we used the ‘Extrude’ tool to add 18mm of thickness, extending the base upwards along the Y axis.
As you work in Fusion, it’s important to keep your files organised. Each component should be saved under the same project heading, for example, ‘Gazebo’. In Fusion, each ‘design’ acts like a separate layer, similar to AutoCAD. We therefore created separate designs for the base, bench, and ceiling layers, while saving them all within the same project folder. Each element begins as a two-dimensional sketch, much like in AutoCAD, before being extruded into a 3D form. After modelling the base layer arc, we moved on to the bench leg boxes, working through the model from the ground upwards. We drew three rectangles measuring 360mm x 180mm, then offset them 18mm inwards to represent the thickness of the plywood. These were extruded 366mm upwards. This height was calculated to position the bench correctly: 18 mm (base thickness) + 366mm = 384mm and adding the 36mm thickness of the bench layer results in a total height of 420mm (42 cm) from the ground.



Base layer arc



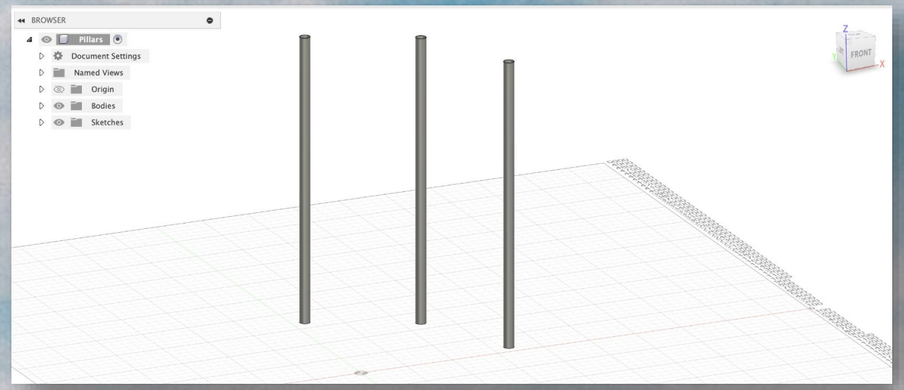
Bench box legs

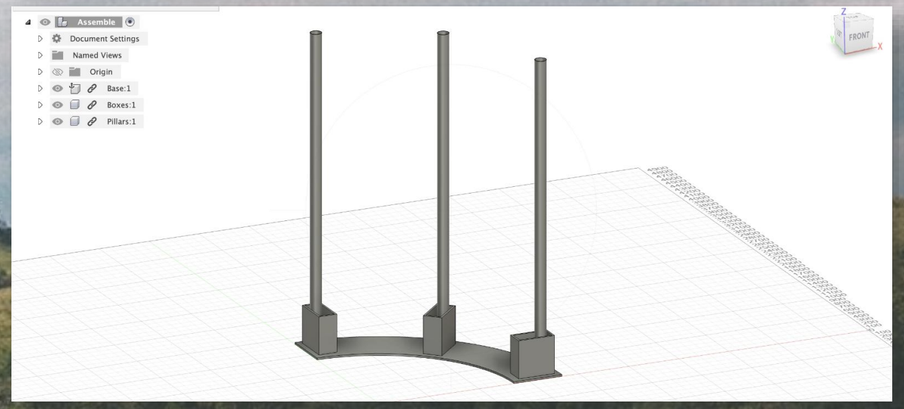
Fusion

We then copied, modified, and rotated the bench leg boxes so they sat adjacent to the straight edges of the arc, rotating them first 45 degrees and then 90 degrees as needed. The two outer bench legs were positioned 50mm inwards from the straight arc edges.
To locate the centre position for the middle bench leg, we created a square around the arc measuring 1830mm and drew diagonal lines between opposite corners. The point where these diagonals intersect marks the midpoint, giving us the centre line of the arc. Once all three bench legs were positioned, we selected ‘Finish Sketch’.

To extrude the bench legs to the same height as one combined form, we selected ‘Join’ under the ‘New Body’ option, allowing the legs to be manipulated as a single shape. To ensure the benches sat correctly within the model, we lifted them 18 mm off the ground by entering this value along the Z axis. Then, we created the bench layer in a similar way to the base layer, sketching the arc first and then extruding it, this time to a thickness of 36 mm.

The poles were drawn as a separate sketch, with a diameter of 110mm, and 2979mm tall – the height we wanted our gazebo at 3000mm – 18mm for the base – 3mm for the ply that sits on the top of the ceiling layer = 2979mm.

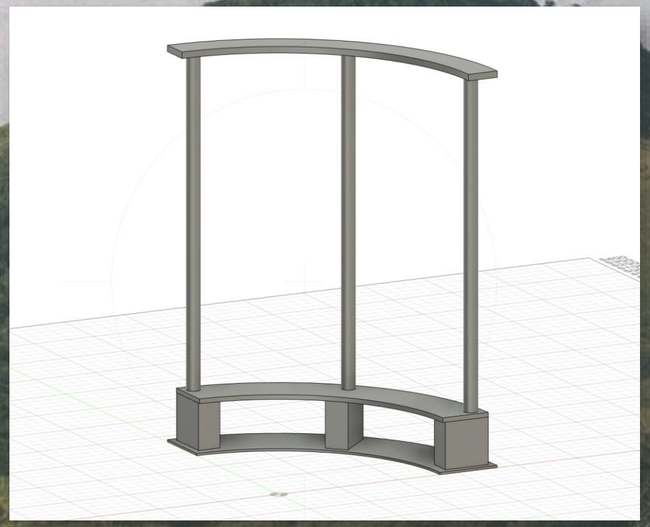




Constructing the gazebo columns with the PVC pipe thickness of 110mm

Fusion

Unfortunately, due to technical difficulties, I was unable to experiment with Fusion independently on my MacBook, but working alongside Ant was a great introduction to the software, using YouTube tutorials (attached don the right) to assist us in our 3D modelling. As it had come to the end of our pre-construction phase, Ant completed the model independently, adding the ceiling layer to the digital drawing at home. This was made with a thickness of 3mm + 3mm (the thickness of the ply at the top and bottom of the ceiling layer) + 25mm (the thickness of the 3x1 that goes between the two 3mm ply arcs) = 31mm



Half of the completed Gazebo model, which we duplicated and flipped to show the finalised version



AutoDesk CAD Tutorials (2025) *Fusion 360 Year 2025 | Beginners Guide | 30 minute Guide to 3D Design | Step-by-Step*
https://www.youtube.com/watch?v=7lKpzGtoQX0&t=298s



Ty Ridings (2024) *Fusion 360: Fast & Easy Start Guide + Pro Tips*
https://www.youtube.com/watch?v=sCkODJJ9ErI

Order List

Order list
To begin the ordering process, I created a document outlining everything I thought we would need for the Gazebo. Once we agreed on each item, I created a refined version of the list to the right into a table with links and their price. We also made several trips to the workshop to check how much paint, primer, glaze, texture, and polystyrene we already had in stock, ensuring we didn't over-order materials. By this stage, the wood order had already been placed, but we needed to think a few steps ahead to the scenic art phase so that additional materials would arrive in plenty of time to be applied to the set.

To work out the quantities of paint and texture we needed, I found a rough surface area for our build using CAD. I drew a rectangle cutting halfway through the arc lengthways that included the top half of the arc, the part of the arc sticking out would roughly fit into the empty space of the rectangle. I used the dimension tool to find its surface area (approx. 2500 x 900mm) then multiplied this by four – for the base, bench and two faces of the ceiling that could be visible to the audience.

Texture and Paint

- Idenden (or Flintex) for texturing the gazebo 23.2m^2 (1 pot is 10L, we have 1 and need 1 more
- Floor of structure could be marble with no sand texture, will need a different kind of primer
- Paint colours (also need 23.2m squared coverage of paint) – flints (check paint store) need Sandstone colour and dark brown for dirtying down
- Sand (play sand so it is soft) 20kg available, get a few
  Wickes.co.uk/Suburban-Play-Sand---20kg
  B&Q tarmac-sand-pit-play-sand-large

Notes from paint store visit

We have:

- Bristol Raw Sienna 1087 – 500g
- Bristol Burnt Umber 1091 – 100g
- Bristol Yellow Ochre 1046 – 150g (dried)
- Rosco Supersat Velour Black (0.2L As a made-up solution)

We need:

- More Bristol Yellow Ochre 1046
- More Bristol Burnt Umber 1091
- Bristol or Rosco white
- Covent Garden Primer
- Greenery (Ivy vines, moss (?)
  English Ivy (lengths of 60cm, need 18x) £3.95, Bridge group need 8 meters
- Sand
- Feather dusters x2
- Flintex

Check in paint store again:

- Covent Garden Primer
- Iron Red Bristols
- Mylands powders
- If there are any pre-existing paint mixes, we can use to help save wastage

Tools

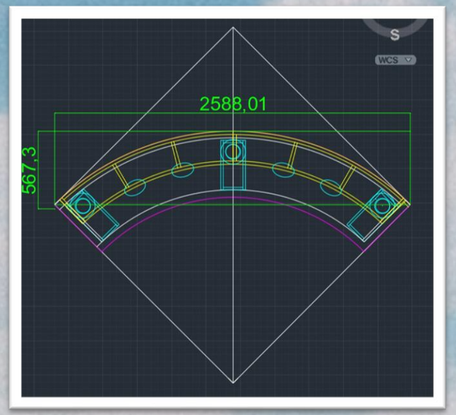
- Rollers
- Scenic art brushes – Lay in, Sash brush
- Feather Duster – marbling effect

Order List

For the pillars, I used an online calculator and entered the radius (55mm) and the height (3000mm) which came to approx. 1m^2 (x 6 for the number of pillars = 6m^2.

Then to work out the surface area of the bench leg boxes, I did 366x180mm + 366x360mm (for the faces of the box legs) x 6 for how many of the bench box legs we have and x 8 for the decorative balusters. The total coverage came to 23.2m^2. With this in mind, we visited the paint store a couple of times in the ordering process to check how much paint, material and equipment we already have in store, and noting anything we were low or needed more for our gazebo design.

We put anything aside we wanted to use, this included the Mylands Burnt Umber, Raw Umber and Yellow Ochre pigment powders and the Bristol's Turquoise and Chrome Yellow.



Working out paint coverage





In the end this polystyrene was already claimed so we would have to order our own

The Mylands Yellow Ochre

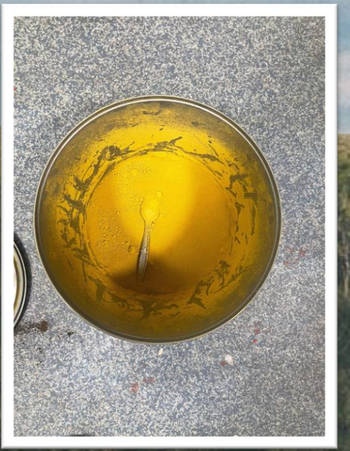








Paint store visits to check what we already had and to group together what we wanted to use



Order List

Item	Source	Link	Quantity	Cost item(s)	Shipping	Total
Flintex	Flints	https://www.flints.co.uk/products/pg_Pliable_Coatings/PATFHS810	1 x 10L	£88.98	£11.95	£88.98
Bristol Yellow Ochre	Flints	Flints bristol-superscenic-paints/BSS11046	1x 1kg	£28.71	^	£28.71
Bristol Burnt Umber	Flints	https://www.flints.co.uk/product/all/bri11091	1x 1kg	£14.74	^	£14.74
Bristol white	Flints	https://www.bristolpaint.com/paints/p/base-coat-white-1000 OR Flints Bristol-StandTex-White-3kg	1x 1kg 1x 3kg	£8.64 for 1kg OR £23.59 for 3kg (if the other group need primer)	^	Depends on quantity - £8.64 or 23.59
Covent Garden Primer (need to double check if we have any in workshop)	Flints	https://www.flints.co.uk/product/all/pat0504	For 2.5L = £54.50 For 23.2m^2 of coverage we need 2.9L - may have some left over need to check, if not we	£95.50 (to account for both the bridge and Gazebo)	^	£95.50
			need more For 5L = £95.50			
Artificial English Ivy	Evergreen Direct	Evergreendirect artificial-ivy-vine Code HAVE10OFF for 10 % off (you're welcome)	18x for Gazebo 14x for Bridge 22x total	£86.9 (£3.95pp)	Free	£86.90
Artificial Edelweiss	DecoFlora	https://silkflowersdecoflora.co.uk/artificial-silk-edelweiss	x3	£8.91 (2.97pp)	£5.95	£14.86
Sand	Wickes	Suburban-Play-Sand---20kg	3x	£15 (£5 pp)	£4.00	£19
Feather Dusters	Amazon	Sandis Anti-Static Ostrich Feather Fur Brush Duster Dust Cleaning Tool with Wooden Handle Household	X2	£12.30 (£6.15 pp)	Free	

After the initial list of orders, I made a refined table of what team Gazebo needed. I then added this information to the combined excel sheet for the Bridge, Gazebo, Banners and Trees Budget tracking.

Order Meeting with Dave

On January 19th, we had a work from home day as repairs in the Workshop were underway. On this day, I had a meeting with Dave to discuss items we needed to order. At this point, we had only completed an order from Pembrokeshire Building Supplies of our softwood, Plywood and PVC pipes.

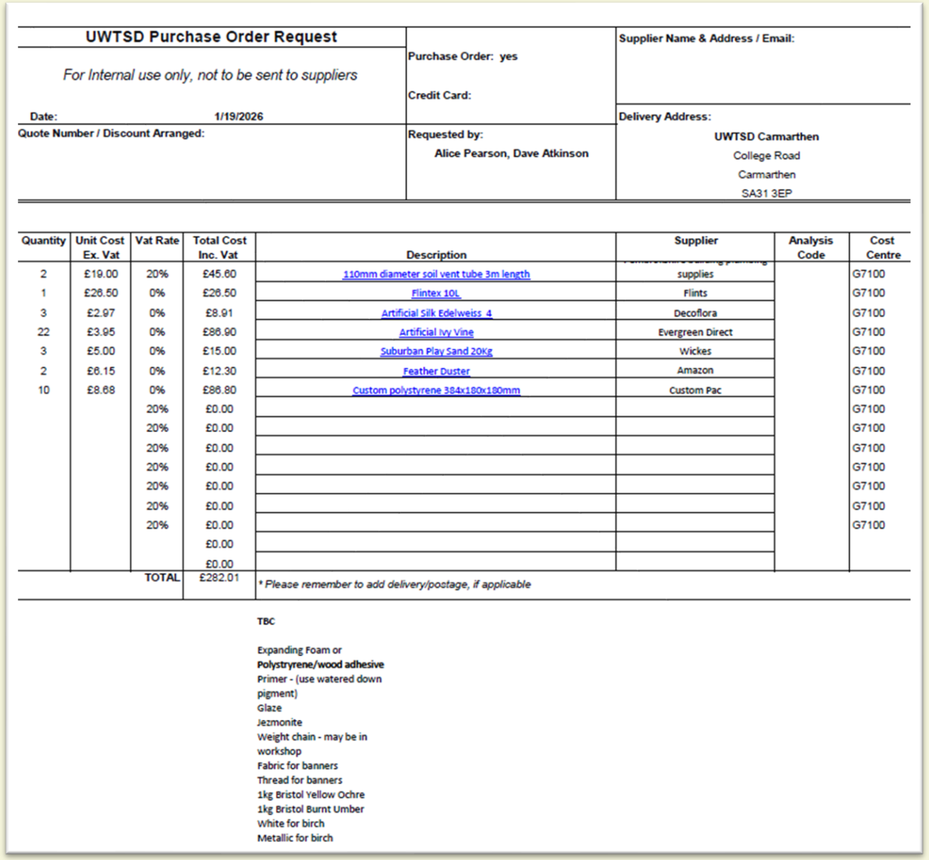
We discussed:

- **We need to order more PVC piping** as we hadn't accounted for the decorative bench legs (which we called vases because of their shape). We need to order two more lengths of 3000mm pipe to make up the 8 lots of 384mm = 3072mm (one is only just not enough for the height of the balusters)
- **Paint and primer** – I had the idea of using Bristol Super Scenic white paint, watered down as a prime layer. We needed white pigment anyways for mixing our sandstone colour, and for the Birch Tress. As well as this, the colour you want to achieve will pop and look best with a plain white background. However, Dave suggested using a thinner version of the pigment and water shade we mix for the sandstone colour as a priming layer. This way, if the scenery gets chipped during transport or scene changes, this will only reveal base coats which are the same colour as the top layer, which will be a better way to hide any scratches.
- **Polystyrene for the decorative bench legs** – we need polystyrene to clad and carve the *vase* shape of the bench legs. The bench legs will have a 110mm diameter, which will be the size of the hole we cut into the polystyrene (or cut slightly larger so it can be adhered to the PVC piping with expanding foam). I found some scraps in the workshop, but these were not the right size for the 384mm x 160mm bench legs, and piecing together different sizes of polystyrene to build the vase shape around the PVC pipe, rather than carve from a block which is the correct heigh and width, would be time consuming. Instead, we looked at ordering custom polystyrene blocks that were 384x180x180mm (the last value at 180mm which is how thick our baluster can be). We first looked on Eccleston & Harts but found a good price on 'CustomPac'. It came to around £80 for 10 at the lowest density. This is a very good price for polystyrene, and the density of the polystyrene can be low because we are using it for decorative purposes and it won't be man handled or interreacted with like a polystyrene prop might.
- **Budget sheet** – I asked for a copy of Daves orders so far, which was the wood order from Pembroke Building Supplies. I could use this order form to format the rest of the orders we need to complete.

Order Meeting with Dave

- **Other items I have thought of that we need to order –** Fabric from Whaley's, chain to add weight to the banners and grippy tape for the base of our Gazebo. The fabric is being ordered from somewhere else, and we will discuss it with the rest of the group to check we have the right amount for what we have in mind. For a chain to add weight – we already have leftover chain from another project that we can use. And for the grippy tape, we will also revisit this later in the process as the structure could be secure enough without it. If not, we have plenty of time to order this later.
- **Paint for the Birch Tree –** So the trees aren't just bright white which would look bizarre and isn't the shade of real silver birch – we could mix in a metallic pigment or powder to make it shimmer like the name Silver Birch suggests. As well as adding earth tones to take away the brilliance of a pure white shade. We can try this out on a sample board to see how this looks, we can also use the Flintex we are using to apply sand texture to our Gazebo; to apply texture to the Birch Trees, we can try this on sample boards first.

After our meeting, I created an updated order form in the format of the University's Approval form, I used a Flints catalogue From 23/24 for an up-to-date price list. I later realised I had to submit a separate form for every supplier we use. So, I used the initial document to produce multiple forms for each source: Amazon, Evergreen direct, Decoflora, Wickes, ScrewFix, Flints and more and created a Budget folder within our Soud of Music Teams Group to keep them all in one place.



UWTSD Purchase Order Request

For Internal use only, not to be sent to suppliers

Date: 1/19/2026

Quote Number / Discount Arranged:

Purchase Order: yes

Credit Card:

Requested by: Alice Pearson, Dave Atkinson

Supplier Name & Address / Email:

Delivery Address: UWTSD Carmarthen, College Road, Carmarthen, SA31 3EP

Quantity	Unit Cost Ex. Vat	Vat Rate	Total Cost Inc. Vat	Description	Supplier	Analysis Code	Cost Centre
2	£19.00	20%	£45.60	110mm diameter soil vent tube 3m length	supplies		G7100
1	£26.50	0%	£26.50	Flintex 10L	Flints		G7100
3	£2.97	0%	£8.91	Artificial Silk Edelweiss 4	Decoflora		G7100
22	£3.95	0%	£86.90	Artificial Ivy Vine	Evergreen Direct		G7100
3	£5.00	0%	£15.00	Suburban Play Sand 20Kg	Wickes		G7100
2	£6.15	0%	£12.30	Feather Duster	Amazon		G7100
10	£8.68	0%	£86.80	Custom polystyrene 384x180x180mm	Custom Pac		G7100
		20%	£0.00				G7100
		20%	£0.00				G7100
		20%	£0.00				G7100
		20%	£0.00				G7100
		20%	£0.00				G7100
		20%	£0.00				G7100
		20%	£0.00				G7100
			£0.00				
			£0.00				
	TOTAL		£282.01	*Please remember to add delivery/postage, if applicable*			

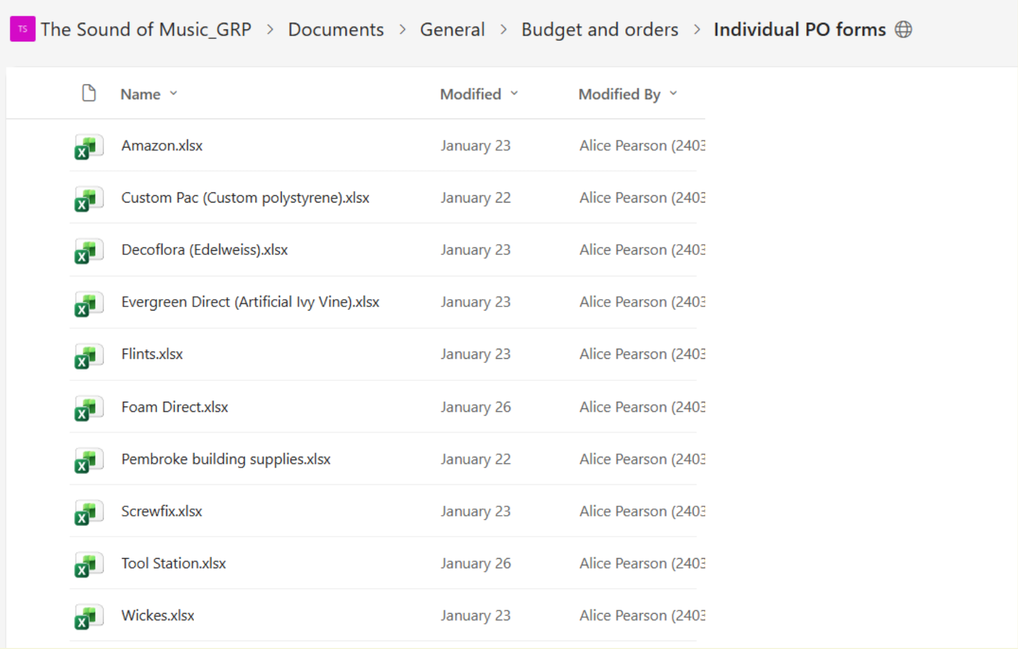
TBC

Expanding Foam or
Polystyrene/wood adhesive
Primer - (use watered down pigment)
Glaze
Jezmonite
Weight chain - may be in workshop
Fabric for banners
Thread for banners
1kg Bristol Yellow Ochre
1kg Bristol Burnt Umber
White for birch
Metallic for birch

The initial order form I filled out incorrectly

Order Forms and Budget Tracking

For the supplier order forms, these were placed in the Individual PO forms folder, and each supplier excel sheet would include everything we needed for Team Gazebo and Team Bridge and the tress, to make the approval process quicker. Flints was our biggest order form as this is where we were purchasing scenic art paints, Jesmonite, Muslin (for scrimming), primer, Flintex (Flints own Idenden) sculpting wire and more.



Individual order forms collated into one folder

UWTSD Purchase Order Request

For Internal use only, not to be sent to suppliers

Date: 1/19/2026

Purchase Order: yes

Credit Card:

Quote Number / Discount Arranged:

Requested by: Alice Pearson, Dave Atkinson

Supplier Name & Address / Email: Flints

Delivery Address: UWTSD Carmarthen, College Road, Carmarthen, SA31 3EP

Quantity	Unit Cost Ex. Vat	Vat Rate	Total Cost Inc. Vat	Description	Analysis Code	Cost Centre	Project Code
1	£88.98	20%	£106.78	Flintex 10L		G7100	
1	£19.08	20%	£22.90	Bristol Chrome Yellow 1kg		G7100	
1	£31.11	20%	£37.33	Bristol Burnt Umber 3kg		G7100	
1	£54.50	20%	£65.40	Covent garden primer 2.5L		G7100	
5	£3.20	20%	£19.20	Muslin Scrim		G7100	
1	£36.10	20%	£43.32	Aqualak matt 1L		G7100	
5	£7.98	20%	£47.88	Quadriaxial Stitched Fabric (per linear metre)		G7100	
1	£106.04	20%	£127.25	Bristol SuperScenic Black 4kg		G7100	
1	£19.08	20%	£22.90	1kg Bristol Brunswich		G7100	
1	£24.16	20%	£28.99	Jesmonite Coade Brown Pigment 1 kg		G7100	
1	£262.07	20%	£314.48	Jesmonite AC100 Large Kit - 70 kg		G7100	
1	£139.95	20%	£167.94	Jesmonite AC100 35 kg Kit		G7100	
2	£19.45	20%	£46.68	Flints Opera Pin Hinge (Box of ten pairs (20 hinges) plus 20 pins		G7100	
3	£33.20	20%	£119.52	50mm Black Nylon Heavy Duty (Low Level) Set of 4 - 600Kg Per Set of 4		G7100	
4	£4.30	20%	£20.64	Polycutter Sculpting Wire 1.6 mm [per m]		G7100	
18	£1.40	20%	£30.24	Hot bed handle			
			£0.00				
		TOTAL	£1,221.44	* Please remember to add delivery/postage, if applicable			

The Flints order form

Order Forms and Budget Tracking

To keep track of our spending and whether items had been processed, shipped or had arrived, Annie and I formatted a class budget sheet. This meant we could see everything we were waiting on in one place, which was useful for when items started to arrive.

Item	Product Link	Price (inc. VAT)	Quantity	Shipping	Total	Processing	Ordered	Arrived
110mm PVC Pipe	Pembrokeshire Building and Plumbing Supplies	£ 19.00	6		£ 114.00	☑	☑	☑
Hot Bed Handle (tree handles)	https://www.flints.co.uk/product/pg_handles_/DOR063	£ 2.97	2		£ 5.94	☑	☑	☑
4x2 Softwood	Pembrokeshire Building and Plumbing Supplies	£ 12.50	4		£ 50.00	☑	☑	☑
3mm Plywood	Pembrokeshire Building and Plumbing Supplies	£ 26.50	2		£ 53.00	☑	☑	☑
18mm Plywood	Pembrokeshire Building and Plumbing Supplies	£ 31.80	6		£ 190.80	☑	☑	☑
100mm Polystyrene	Pembrokeshire Building and Plumbing Supplies	£ 19.00	8		£ 152.00	☑	☑	☑
110mm PVC pipe	Pembrokeshire Building and Plumbing Supplies	£ 31.80	8		£ 254.40	☑	☑	☐
18mm Plywood	Pembrokeshire Building and Plumbing Supplies	£ 31.80	6		£ 190.80	☑	☑	☑
3mm Plywood	Pembrokeshire Building and Plumbing Supplies	£ 30.00	4		£ 120.00	☑	☑	☑
2x1 Softwood	Pembrokeshire Building and Plumbing Supplies	£ 1.26	30		£ 37.80	☑	☑	☑
Flintex (10L)	https://www.flints.co.uk/products/pg_Pliable_Coatings/PATFHS810	£ 106.78	1		£ 106.78	☑	☑	☑
Bristol Chrome Yellow (1kg)	flints Chrome-Yellow-(1kg)	£ 22.90	1		£ 22.90	☑	☑	☑
Bristol Burnt Umber (3kg)	flints Burnt-Umber-(3kg)	£ 37.33	1		£ 37.33	☑	☑	☑
Covent Garden primer(2.5L)	flints Covent Garden Primer (2.5L)	£ 65.40	1		£ 65.40	☑	☑	☑
Muslin Scrim (4ft x 1m)	flints Muslin-4ft-wide-(per-m)	£ 3.84	5		£ 19.20	☑	☑	☑
Bristol AquaLak (1L)	https://www.flints.co.uk/product/water-based-glazes/BRIAQ002	£ 43.32	1		£ 43.32	☑	☑	☑
Artifical Edelweiss	https://silkflowersdecoflora.co.uk/artificial-silk-edelweiss	£ 2.97	3	£ 5.95	£ 14.86	☑	☑	☑
Artifical Ivy	https://www.evergreendirect.co.uk/product/artificial-ivy-vine/	£ 3.95	22		£ 86.90	☑	☑	☑
Soft Sand (texturing)	https://www.wickes.co.uk/Suburban-Play-Sand---20kg/p/285242?utm_source=g	£ 5.00	3		£ 15.00	☑	☑	☑
Feather Duster	https://www.amazon.co.uk/Sandis-Anti-Static-Ostrich-Feather-Cleaning/dp/B086	£ 6.15	2		£ 12.30	☑	☑	☑
Polystyrene	https://www.custompac.co.uk/polystyrene-cut-to-size?gad_source=1&gad_camp	£ 9.82	8		£ 78.56	☑	☑	☑
Expanding Foam (polystyrene to wood)	soudal-gap-filling-expanding-foam-combi-trade-pack	£ 53.99	1		£ 53.99	☑	☑	☑
Plastazote	PlastazoteLD33 - White Closed Cell Foam 200x100cm	£ 29.99	1	£ 11.99	£ 41.98	☑	☑	☑
Sponge	https://www.screwfix.com/p/essentials-sponge-112mm-x-210mm/359VE?tc=YA	£ 0.95	3		£ 2.84	☑	☑	☑
Screws (30mm)	https://www.toolstation.com/single-thread-countersunk-pozi-screw/p34970	£ 1.68	18		£ 30.24	☑	☑	☑
Wire	https://www.amazon.co.uk/Aluminum-Bendable-Sculpting-Modelling-Skeleton/d	£ 5.99	1		£ 5.99	☑	☑	☑
Contact adhesive	https://www.screwfix.com/p/evo-stik-impact-adhesive-off-white-amber-250ml/3	£ 2.50	2		£ 5.00	☑	☑	☑
Flints shipping					£ 11.95			
TOTAL					**£ 1,823.28**			

Trees
Bridge
Gazebo
Banners

Order Forms and Budget Tracking

As well as having a full overview of the orders, I also separated them into tables depending on an items designated set piece, to make it easier for us to read.



INDIVIDUAL ITEMS:

Trees						
110mm PVC Pipe		Pembrokeshire Bui	£ 19.00	6	£	114.00
Hot Bed Handle (tree handles)	https://www.flints.co.uk/product/pg_handles_/DOR063	£	2.97	2	£	5.94
TOTAL					**£**	**119.94**

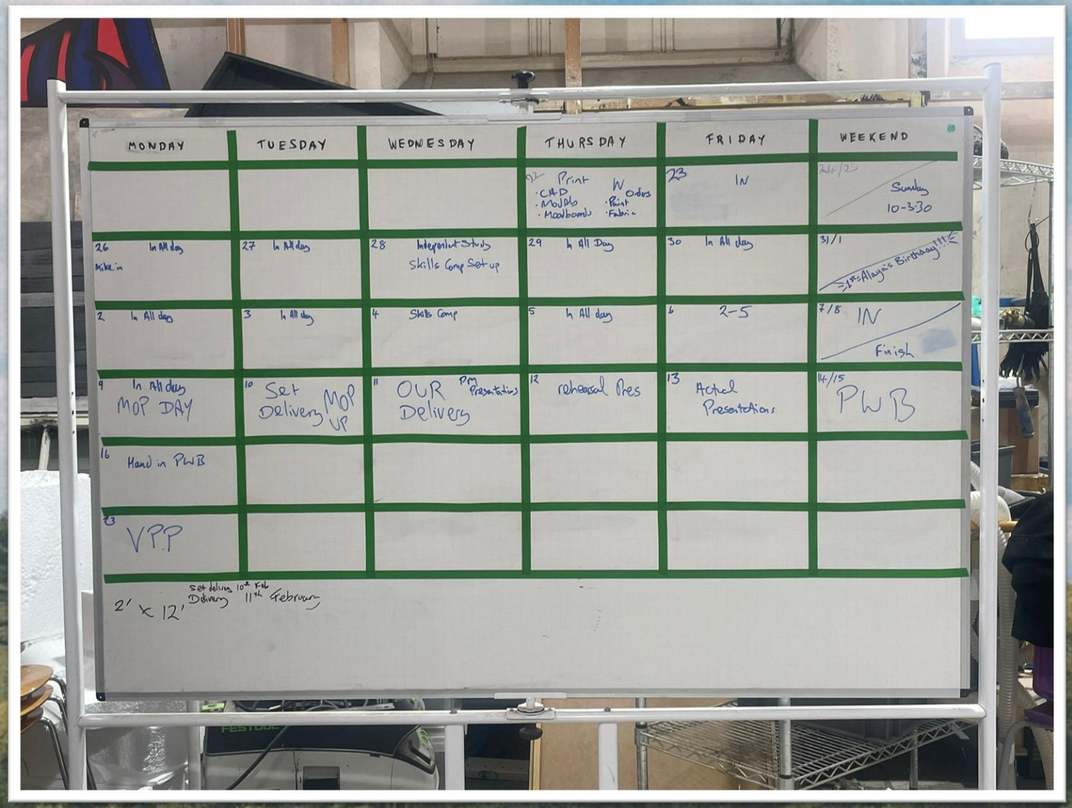
Bridge						
4x2 Softwood	Pembrokeshire Building and Plumbing Supplies	£	12.50	4	£	50.00
3mm Plywood	Pembrokeshire Building and Plumbing Supplies	£	26.50	2	£	53.00
18mm Plywood	Pembrokeshire Building and Plumbing Supplies	£	24.50	6	£	147.00
100mm Polystyrene	Pembrokeshire Building and Plumbing Supplies	£	19.00	8	£	152.00
TOTAL					**£**	**402.00**

Gazebo						
110mm PVC pipe	Pembrokeshire Building and Plumbing Supplies	£	31.80	10	£	318.00
18mm Plywood	Pembrokeshire Building and Plumbing Supplies				£	-
3mm Plywood	Pembrokeshire Building and Plumbing Supplies	£	30.00	4	£	120.00
2x1 Softwood	Pembrokeshire Building and Plumbing Supplies				£	-
Flintex (10L)	https://www.flints.co.uk/products/pg_Pliable_Coatings/PATFHS810	£	106.78	1	£	106.78
Bristol Chrome Yellow (1kg)	flints Chrome-Yellow-(1kg)	£	22.90	1	£	22.90
Bristol Burnt Umber (3kg)	flints Burnt-Umber-(3kg)	£	37.33	1	£	37.33
Covent Garden primer(2.5L)	flints Covent Garden Primer (2.5L)	£	65.40	1	£	65.40
Muslin Scrim (4ft x 1m)	flints Muslin-4ft-wide-(per-m)	£	3.84	5	£	19.20
Bristol AquaLak (1L)	https://www.flints.co.uk/product/water-based-glazes/BRIAQ002	£	43.32	1	£	43.32
Artifical Edelweiss	https://silkflowersdecoflora.co.uk/artificial-silk-edelweiss_	£	2.97	3	£ 5.95	£ 14.86
Artifical Ivy	https://www.evergreendirect.co.uk/product/artificial-ivy-vine/	£	3.95	22	£	86.90
Soft Sand (texturing)	https://www.wickes.co.uk/Suburban-Play-Sand---20kg/p/285242?utm_source=g	£	5.00	3	£	15.00
Feather Duster	https://www.amazon.co.uk/Sandis-Anti-Static-Ostrich-Feather-Cleaning/dp/B08(	£	6.15	2	£	12.30
Polystyrene	https://www.custompac.co.uk/polystyrene-cut-to-size?gad_source=1&gad_cam	£	9.82	8	£	78.56
Expanding Foam (polystyrene to wood)	soudal-gap-filling-expanding-foam-combi-trade-pack	£	53.99	1	£	53.99
Plastazote	PlastazoteLD33 - White Closed Cell Foam 200x100cm	£	29.99	1	£ 11.99	£ 41.98
Sponge	https://www.screwfix.com/p/essentials-sponge-112mm-x-210mm/359VE?tc=YA(	£	0.95	3	£	2.84
Screws (30mm)	https://www.toolstation.com/single-thread-countersunk-pozi-screw/p34970	£	1.68	18	£	30.24
Flints shipping					£	11.95
TOTAL					**£**	**1,081.55**

Back to work meeting

After our short hiatus away from the workshop, on Thursday 22nd January, we reconvened in the workshop to discuss the updated schedule and our plan of action.

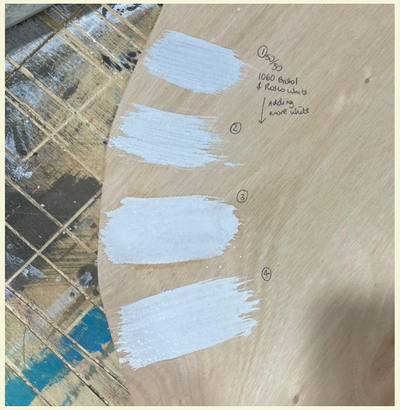
We decided the main aim for the day was to discuss any pending orders that needed submitting, clearing the Design Room and Workshop before beginning our construction phase, then in the afternoon start building. I brought in our mood boards and 1.10 scale model as well as our CAD drawing which was complete and ready for printing. After our meeting, and once the space was cleared, my group began with making paint samples so we could double check what we have and what we need to order in terms of paint and texture.



Sample Boards

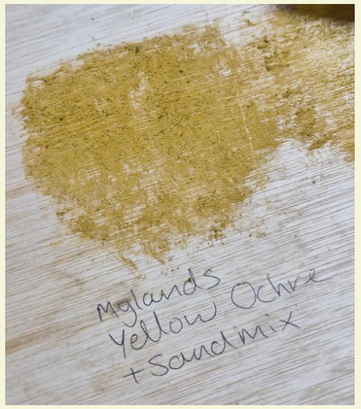
We found the Mylands powder in a range of Earth shades, these require a binding agent – typically Shellac or, it can be combined with Bristol's Aqualak. In this instance, we can combine the powdered pigment with the Flintex (which is a bright white) to create a coloured texture and to act as a primer for our Gazebo's paint layer. It is quite difficult to paint over texture, hence adding colour to the texture itself, which is a useful step in making sure there is good coverage. As well as a beige colour over the Flintex and sand mixture, we also plan to add signs of aging and weathering. The paint we plan to use to go over the texture and for painting the base board in a marble effect is Bristol or Rosco scenic paints. Unlike in our last project where we used acrylic, we want the paint to be good quality which means they are less likely to flake or peel and have a stronger pigment which requires less coats on the set piece. As Cam mixed up the green weathered shade, and Alaya experimented with the Flintex, sand and Mylands pigments to create a beige, I made up some birch tree samples, combining Bristol 905 Copper and white and also Bristol 1060 Silver and white with a little Britsol Raw Umber added to both – I wanted to see if the metallic shine effect could be subtle or would look too gimmicky. I started the birch pigment with an even mix of silver and white then added a little more white as I swatched the pigment on the sample board. I found the less metal colour, the better as the metallic pigments are very strong.











Construction

Next, we had a discussion about how were going to put our Gazebo together before sending off the CAD drawing for printing. Originally, we had planned to put the ceiling piece of the Gazebo together by creating small incisions into the length of a 2x1 softwood piece, so it could be bent to join the two curved pieces of 3mm together. Because the curve is quite long and exaggerated, we thought about instead cladding it with short cuts (say 300mm) of 2x1 positioned in a curve along the arc, then neaten up these supports and round it off using expanding foam which can be sanded down to create a neat arc shape. The foam, like the rest of the Gazebo, will be sealed with Flintex.

For transporting our very tall structure to the Lyric, we can build it in three parts:

1. The base and bench (including the bench box legs and balusters)
2. The columns (which can be lifted out of the ceiling and bench legs)
3. The ceiling (with a hole for the top of the columns to sit in)

In terms of the scenery being moved on and off the stage, we can router the edges to help them move easier. The pieces of our Gazebo set will be skated which effectively means dragged, on and off stage. Routing the edge means the gazebo can be slightly leant back so there is less friction between the set piece and floor when it is being manoeuvred.

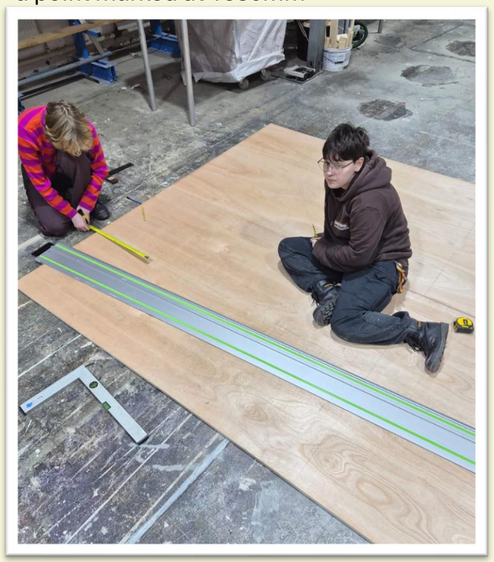
Before we began building, we had some advice from Dave to make an updated scenic art reference mood board and to look at how mould and moss grows in nature, as the refined model looks too uniform and symmetrical with its moss placement. The black lichen (or algae) effect should have more at the bottom of the gazebo and less as it climbs. We also decided to change the kind of Ivy we were using, there was quite a price difference, but the first option looked as cheap as it was. We wanted a long thin ivy garland for a vertical climbing effect and the first option I had put down was a little too thick.

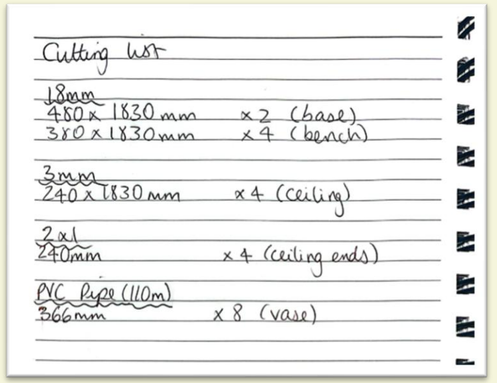
Construction

For the construction phase of our process, we began with a cutting list. The fist stage of our construction process was to measure out the arc shaped pieces of 18mm plywood which would make up the base, bench and ceiling of the Gazebo. We began here because these components required a large surface area and we hadn't figured out exactly how much plywood we would use for these. The other items that will be made from the Plywood is some 366mmm x 360 x 180 x 350mm box bench legs – for which we had calculated that the off cuts from our Arc shapes should be plenty.

To create an accurate arc shape, we placed two 18mm 8x4 foot flats next to each other along their long edge. Then we drew a 1cm perimeter along the x and y axis (making sure this was a square line). From this perimeter we measured 1830mm from one corner along the edges of the plywood. Once we had a 1830mm square, which would use one piece of 8x4 foot ply sheet plus about 400mm of another, we made a compass from a 3mm scrap piece of wood. This is where you drill a whole through the ply at one end, then from this hole measure the desired radius – ours was 1350mm (this is 1830mm – 480mm which is the width of our bench) and drilled another hole. With this, you can place a screw through the compass into the corner of the ply where the 1cm perimeter line meets and place a pencil through the other and use the compass attached to the ply to draw the arc.

Placing the ply sheets together to measure and draw the arc, starting with a point marked at 1830mm



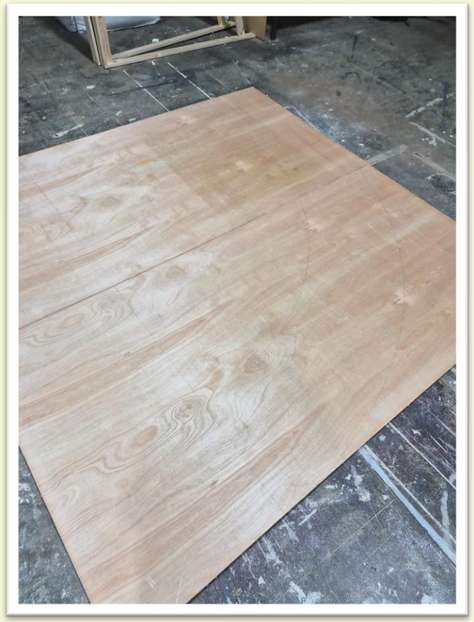




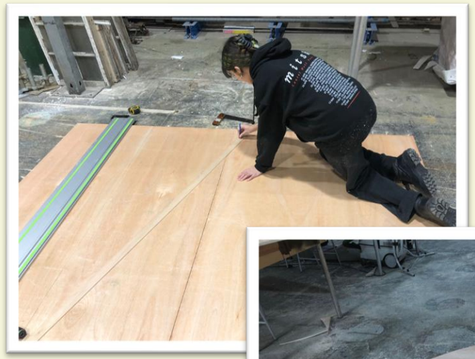
Using a thin scrap piece of ply to make a compass for the arc

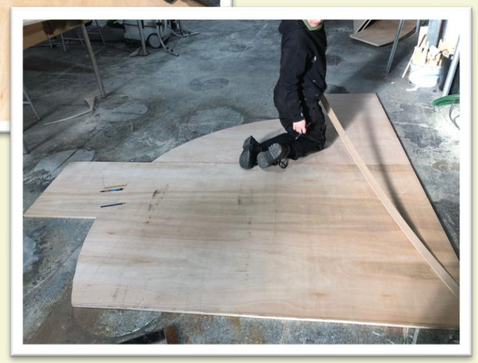
Construction

We could have just used the compass for marking out these arc shapes but the idea of making a 1830mm square first, was to make sure our arc would turn out straight and accurate. It was also so we could mark the centre line of our arcs by using opposite corners of the square and drawing a line between them. This will help us later down the line when placing the bench legs that sit on the centre line. Once we had our base layer marked out, we used the Jigsaw to cut along this line. We also drew symbols across the two sheets of plywood, so we knew which cuts went together to form one arc.



(Left) It is faint but here is a complete curve marked across the two sheets of ply





Alaya and I using the thin piece of ply as a compass to mark our arc shapes



Marking across the two sheets so we know which curves go together.

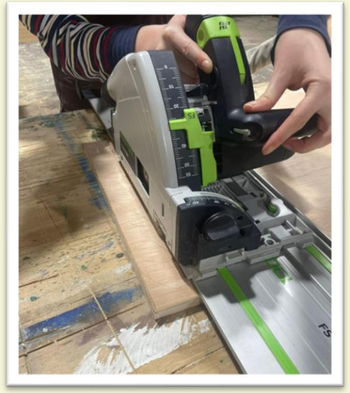


Squaring off the 1cm perimeter with a rail saw

Construction

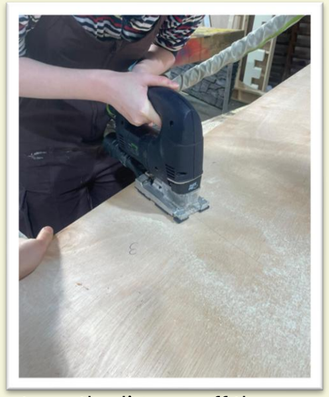
We decided to do the sawing motion in one cut to preserve as much of the 18mm off cut as possible. Since our marking out process was a more wasteful way of cutting out the arc shapes, we made sure to keep these large off cuts for making the bench legs. Using the jigsaw in one long cut was quite challenging and meant working at awkward angles, we eventually resulted to getting onto the table for when we got near to the arcs centre, with the person on the table kneeling on the plywood to keep it still as they sawed, and someone else holding the bench piece to support the underside of it, which was now off the table. We found we always needed a minimum of two people working with the Jigsaw to hold the plywood steady.

To speed up this phase, we split into pairs. Ant and Alaya worked on marking out the arcs – marking 380mm width arcs for the bench top on the 18mm, and marking 240mm wide arcs on 3mm for the ceiling, simultaneously, Cam and I jigsawed the arc shapes, then rail sawed off the square line marks at the ends used for the compass midpoint. We would swap around the responsibilities of measuring and cutting to help with monotony fatigue, and also to cross check our markings.

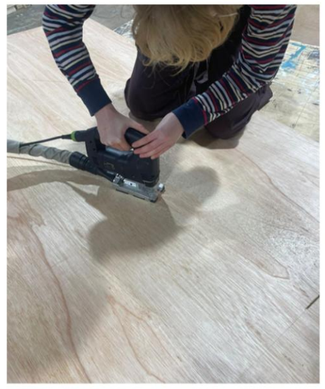


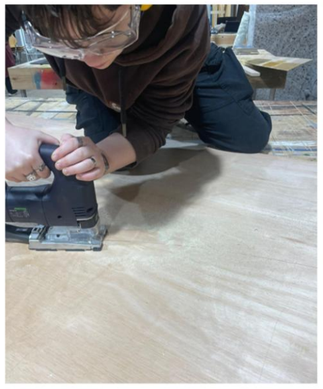
Using the rail saw on the square edges





(Left) I don't recommend this form, but you must use the Jig saw off the table, (right) it's useful having someone else support the underside of it





Cam and Ant working on the table to cut near the centre of the arc, when the rest of the ply would have to be mostly off the table

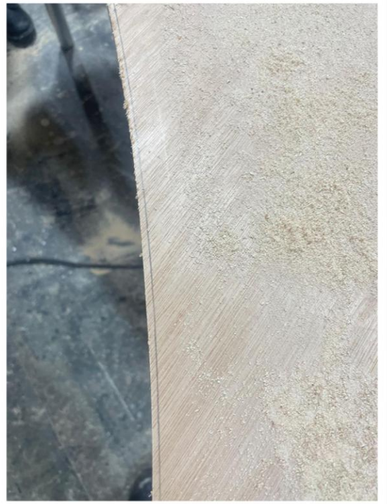


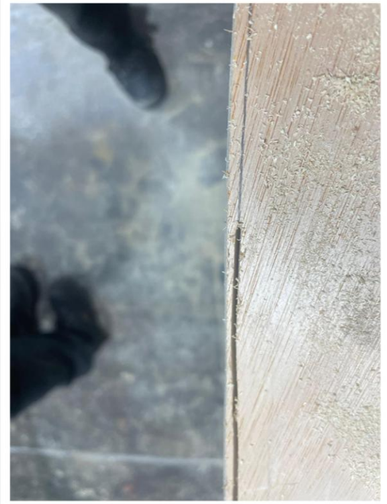
Our complete pile of base arc cuts

Construction

My battle with the Jig saw:
Of all the tools of the Workshop, the Jigsaw may be my least favourite. This stage of the process was quite literally a learning curve, here are some mistakes I made:

- Failing to consider width of blade - You can't depend on the guide-line built into the jigsaw. I also learned the importance of starting the saw correctly. Placing the base plate flat on the material, with the blade positioned near the start of the cut, and allow the blade to reach full speed before cutting the wood
- Struggling to see where the blade is going - I found that focusing my eyesight slightly ahead of the blade, following the pencil line rather than watching the blade itself, helped me maintain a smoother and more consistent path.
- Going too fast - When cutting tighter curves, slowing down and gradually rotating the body of the saw gave me better control. You should avoid twisting the saw sharply or applying sideways pressure, as this affects the accuracy of the cut. Another key thing I found was to guide the saw rather than force it.
- Dropping a piece of wood - After completing a cut, I allowed the arc to fall off table instead of asking someone to catch it, this meant the corner snapped off (oopsie)





Having to re-cut lines that were not quite on the pencil mark



The arc cut I dropped



This is what happens when you go too quickly, the blade can get away from you causing wonky lines



This is what happens when the base plate isn't flat against the wood

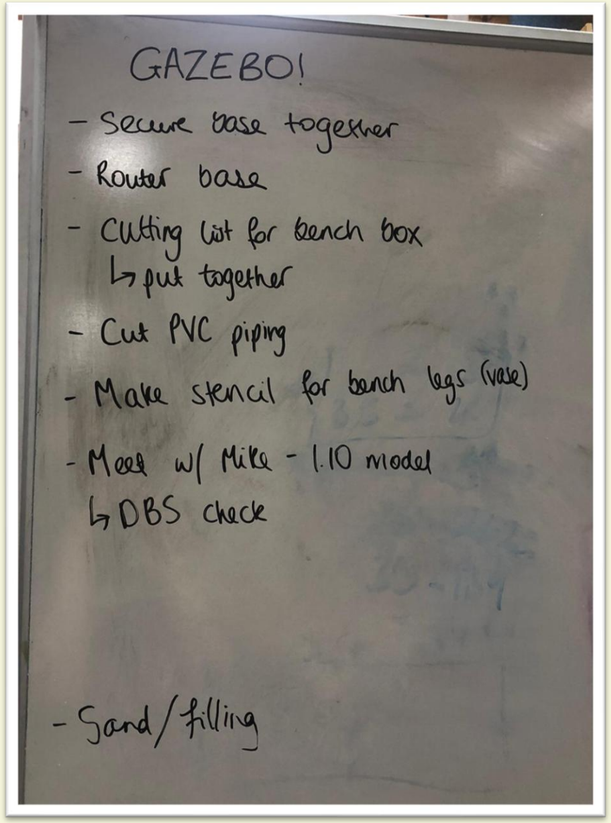


Finally (probably by the last arc cutting) getting my jigsaw to follow the pencil mark

Construction

In the week beginning 26th of January, we had a lot of work to do. The first thing we did this week to organise our thoughts, and to keep us from making mistakes (like forgetting to mark centre lines before cutting the arc shapes out), we made a to do list. We would be able to add to this as we thought of more jobs that needed completing and keep track of our progress. Using the list, we could set our aims for the day. The list to the right is by no means complete, but it was a good way to start visualising how the Gazebo could come together.

We thought we could begin by putting together the base and bench arcs which were all in two parts as they didn't fit on one 8x4 foot flat. We quickly realised we didn't have the right screws that were long enough to go through two layers of 18mm ply. Instead, we completed cutting the ceiling arcs out, decided to place final orders that we had forgotten to consider like some foam to make the cone column feet, and thought we could cut the rectangles needed for the box bench supports and PVC piping.



Our to do list as of Minday 26th January





Ant, King of Jigsaws cutting the ceiling arc shapes from 3mm ply, the final arc cuts

More orders…

Something that we needed to consider was how we were going to clad the PVC pipe where it meets the bench and ceiling pieces. As part of our design, we want to include bases at the bottom of the columns inspired by Baroque architecture. Roman-style columns often flare out at the bottom in a smooth or stepped profile, which gives them a wider surface area and a stronger foundation, and this was something we wanted to include on our Gazebo.

Originally, we had planned to use the shape the PVC pipes come as, to help decorate the columns. We thought these pipes would have a wider cone at one end, than they ended up having (which is what allows the poles to slot together). These turned out to be quite insignificant to the size of our Gazebo, and when considering how it will be viewed – from a seat in the auditorium, you may not even notice from this distance these slightly wider elements on the columns. Instead, we thought about how we can exaggerate these shapes. At first, we considered using scrap polystyrene to make conical shapes that could wrap around the piping, but these scraps had already been claimed. Next, we thought about sourcing a custom size polystyrene shape and looked into Graham Sweet, a Prop Maker who sells custom plastic and polystyrene products. Graham Sweet Studios supply a range of decorative shapes for anything from snowflake decorations for a Christmas concert or 3D lettering for shop window displays. However, his prices were quite high, for one cone that was the correct size at a maximum diameter of 200mm, was £28.15 (=£168.9 for 6) or a 10 pack for £150.18. We wanted the cones to have a diameter of around 180mm at their widest, so the smallest size they offer at 150mm for £26.48 pp wasn't suitable either.

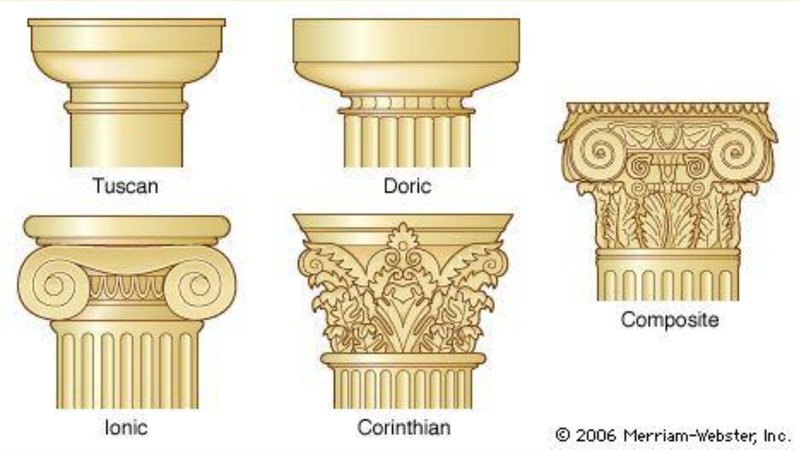




The decorative cones on Cam's model which we wanted to include at the top and bottom of the columns



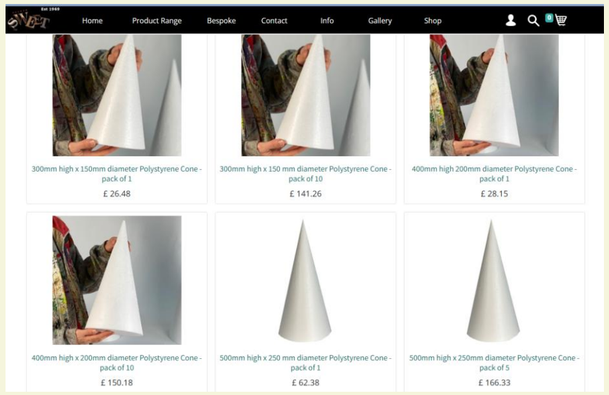
The slightly flared shape on the PVC Pipes we felt wasn't big enough



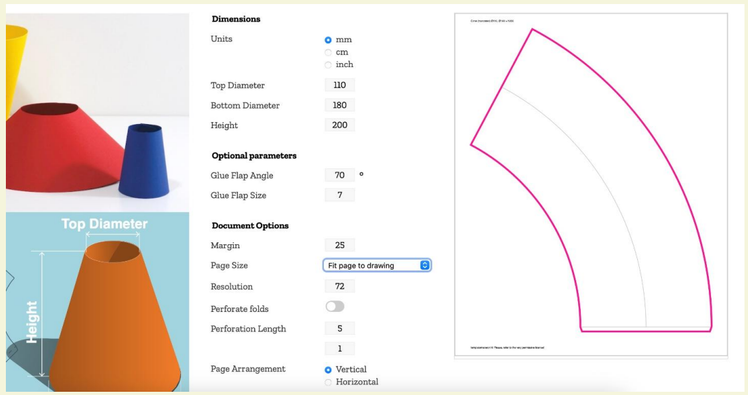
Here are some examples of the kind of architecture we were looking at for inspiration for our column mouldings. These examples are very detailed but show how Roman style columns change shape at the top and bottom.
Capital styles for the five major orders of Classical architecture. Merriam-Webster Inc. (2025)

More orders...

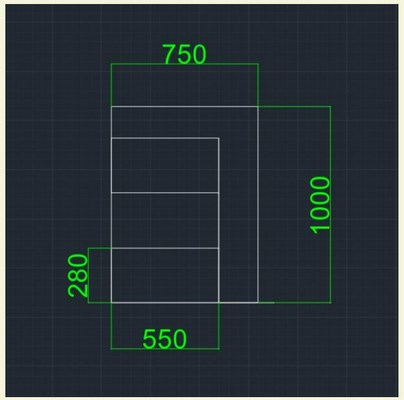
Next, we looked at traffic cones for a much cheaper alternative. We faced some issues looking at traffic cones, as we couldn't find the measurements of their diameter online, only their height. We were able to find some standard traffic cones on Screwfix for £6 pp. We could assume that they would be big enough to be cut to the size we are after (roughly 200mm high and 180mm wide) but it was a risk. Since we had enough of a budget to go slightly more expensive, we thought about using Plastazote to make our custom cones. To work out how much Plastazote we needed to make one cone, we used an online cone template maker and added our desired smallest (110mm) and widest (180mm) diameters and 200mm height into the template maker. Alaya then printed this template out to scale, then I drew a rectangle around this for a rough idea of the surface area one cone needs - this was 280mm x 550mm. We first looked at Flints who sell Plastazote for prop making. They sell 3, 6 and 12mm thick Plastazote with their 6mm white foam costing £14.49 per sheet. Annoyingly their sheets came in 1000mmx750mm sheets, and one of our cones needed roughly 280 x 550mm of surface area, so we would only fit 3 cones per sheet, this would cost us £57.96 for 4 sheets.



Graham Sweet Studios (2026) *Screenshot of webpage: Polystyrene Cones*



TemplateMaker (2026) *Cone (Truncated) Template Maker, Dimensions*



Using AutoCAD to work out how many cones we could make from 1m x 0.75m foam

More orders...

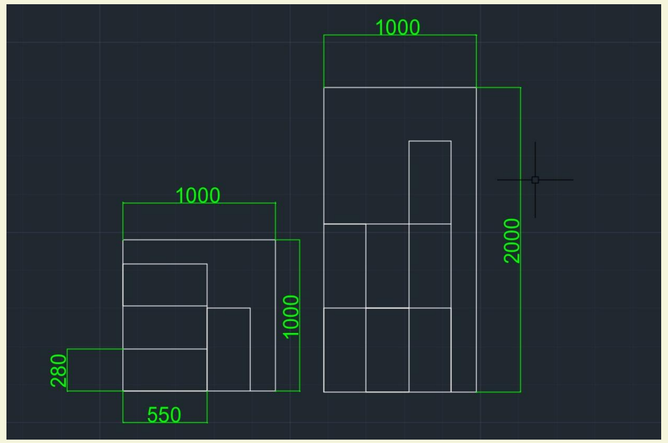
As I was looking around at other Plastazote suppliers, Dave showed us some Plastazote that had arrived late for a different project, so was unused. This was 6mm thick 1m x 1m Plastazote that we could use for our cones. Using AutoCAD, I worked out we could make 4 cones from this sheet but would still need to order more Plastazote for the remaining 8 cones. I checked the site that this Plastazote had come from: Poly Props. They sold either custom size sheets or 1m x 1m sheets which worked out more expensive than: Foam Direct. I looked at this site along with GB Foam for the cheapest option and found on Foam Direct we could purchase a 1m x 2m sheet for £29.99 + £11.99 shipping (extortionate I know) with a 15% discount = £35.68. This is what we chose in the end as our Plastazote supplier.

Using the template we had generated, Alaya was able to print this off in scale in the Library across several sheets of A4 which she taped together. She cut out this template and used it on a bit of the unused Plastazote to check it was the right size.

As for the outstanding orders we needed to complete, we needed Expanding Foam to fix the polystyrene vase shapes to the pipes (and it could be used as added support for the cones) and screws. We found some expanding foam on Tool Station which included a 6 pack of 750ml gap filler expanding foam, 1x 500ml foam and gun cleaner, and 1x PU foam gun. We also ordered 30mm screws as we didn't have any long enough in the workshop to go through our two layers of 18mm plywood



Alaya's printed template for out cones which she went on to use on a piece of Plastazote to check it was the correct size when applied to the PVC piping



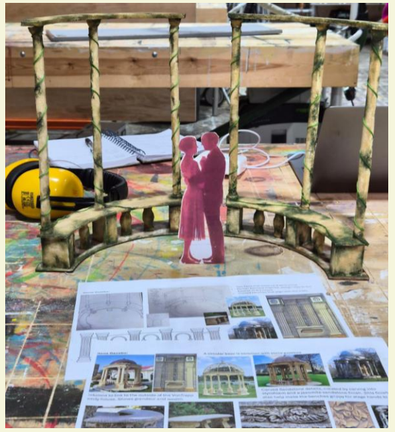
Using AutoCAD to work out how many cones we could make from the 1m x 1m sheet and if the 1m x 2m sheet would be enough for the remaining 8 (it turned out it could fit 9!)

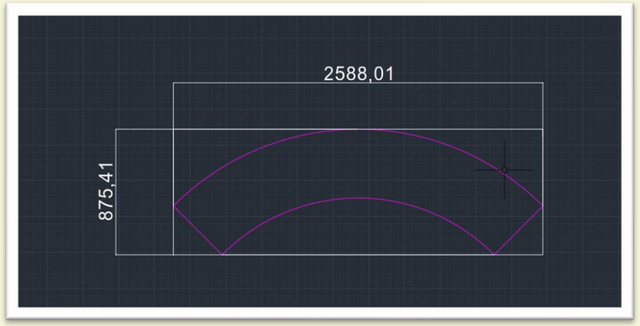
Production Meeting No. 3

After lunch on Monday the 26th, Mike and Wyn visited us to check in on our progress. At this stage we would have been a week further into the building process, had we been in the workshop. Due to the leak, we were behind on our improvised schedule, but we still had plenty of time to complete the Gazebo and Bridge in time for the Get In.

We explained this to Mike and Wyn and instead of showing them part of a completed Gazebo, we showed them our refined 1.10 model with the scale figures, and the 18mm ply pieces we had cut out to give them an idea of the bench's width. I spoke to Wyn about how rehearsals were going and he spoke about how the performers playing Liesl and Rolf are currently practicing on school benches which is what Cam and I had thought of when deciding the width of the bench. Mike also asked us about how wide the structure is in total, so I gave him a rough approximation using CAD by drawing a rectangle around the base, much like we did to find the surface area when ordering paints. This was so Mike knew roughly how much space our structure takes up so he can plan how we will store it in the Lyric wings – it will need roughly 2600 cm x 875cm of floor space.

As a class, we also discussed ways to cut down on the workload, so we weren't under a lot of stress to complete the set pieces. There was an idea of ordering printed Swastika Banners so we would just have to affix the Velcro to make one of them rip-able. We were still happy to continue our Gazebo, Bridge and Tress, but getting rid of the idea to make the flags from scratch, meant we could take away some of the added pressure from having less workshop access. Wyn and Mike were pleased with our refined model, having only seen our initial model which had much less detail. The updated model demonstrated the new integral bench design, and how we intend to paint and texture the Gazebo.





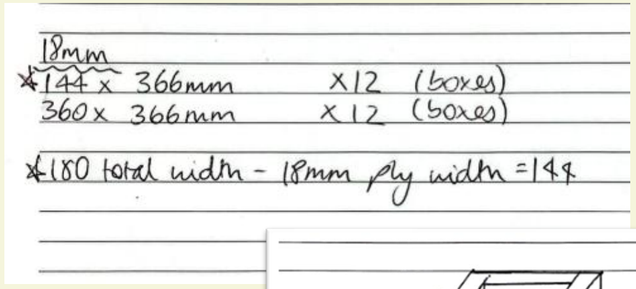
Rough working out of how much floor space half of our Gazebo takes up, by measuring a rectangle around the base layer.

Construction

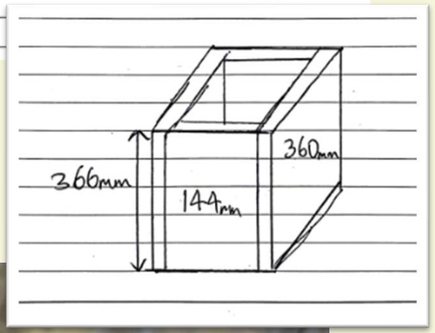
After figuring out the final orders of Plastazote, Expanding Foam and screws, Cam and I began on the ‘box’ cutting list. These boxes were the rectangular table legs that support the two edges and centre of the bench, of which we needed to make 6 (3 for each half of the Gazebo structure). For this, we were using remaining 18mm plywood we had used for the base and bench pieces. On these off cuts, Cam and I began with a measurement of 366mm from a square edge on the off cut (the distance we want between the base layer and bench layer to make the bench 420mm high off the ground). We rail sawed along this measurement of 366mm, then marked 144mm (the width of the boxes at 180mm – 18mmx2, the thickness of the ply) then cut, repeating this process on pieces of off cut ply until we had 12 lots of 366mm x 144mm pieces of 18mm.

We did have some difficulty at first, finding and making square lines from round off cuts of 18mm – to get around this we would sometimes draw our own square line from a random edge of the ply off-cut and use this as a starting point. We also had some difficulty at times moving the rail saw through the plywood. Both Cam and I struggled at times to cut through the ply, we realised it could have been that the blade needed replacing, we tried a different rail saw which worked a lot smoother. There were at times still some particularly tough parts of ply to cut, but this could have been down to impurities in the plywood and how it is put together, which can depend on the quality and price of the plywood.

Meanwhile, Alaya and Ant carried out the same process but for the 360mm x 366mm pieces of ply. Once our 30mm screws arrive, we will be able to put together the Base and bench along with these boxes.



The boxes cutting list



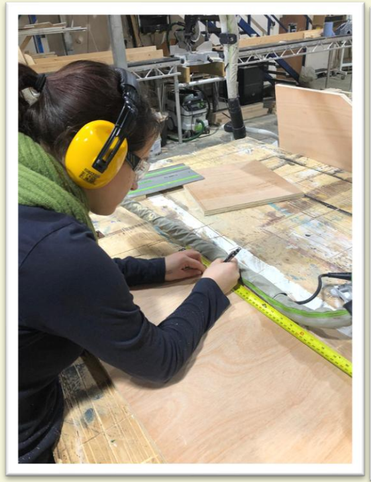


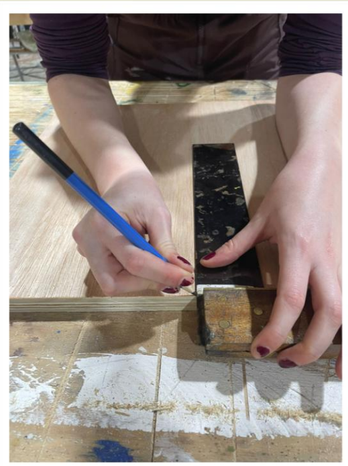
Impurities in the Plywood which cause the rail slaw to slow

Construction









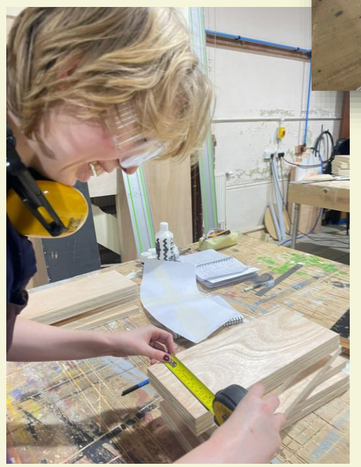


Here you can see our process: measure the top and bottom of the 366m wide plywood at 144mm from a square line. Draw a new square line along the 144mm mark, rail saw this line then check the measurement of the cut was correct and straight. We repeated this process for each of the 12 pieces of 144mm plywood.

Here you can see where we had some issues with the first rail saw. It struggled to cut through the plywood, creating excess friction. This resulted in burning and blackened marks on the ply, likely due to a dull blade and a slow feed rate rather than using a quick, clean cutting action.

We also double checked the accuracy of each piece at the end of our cuts, as we had 10 minutes before we needed to pack up for the day. We had plenty of scrap ply left to play with, so we decided to re do a couple that weren't completely accurate





Construction

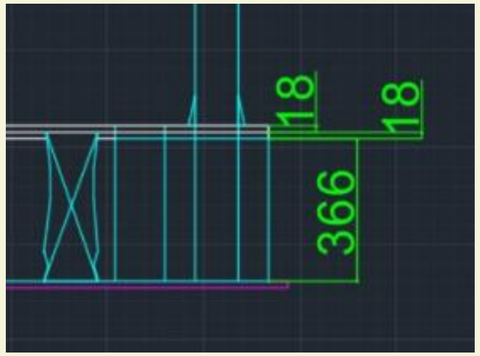
The next day, we looked over our to do list and put a star next to our aims for the day:

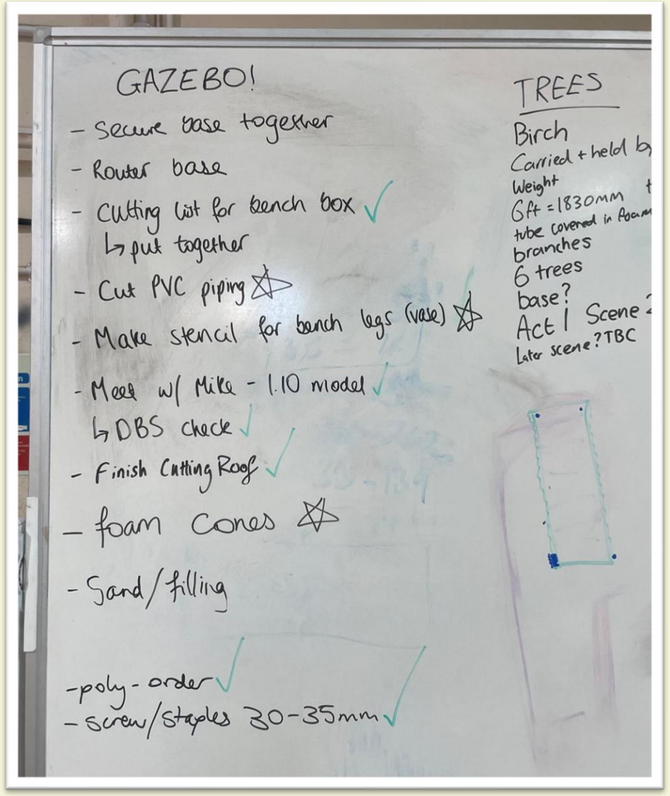
- Cut the PVC pipes which will be the inside of the polystyrene bench legs, of which we need 8
- Make the polystyrene stencil for the bench legs
- Finish off the Foam cone template and cut these out of the foam we have already in store.

Initially, we thought we would be screwing our boxes together as this would be more secure than stapling, it turned out, staples were more than fine to use so we were able to crack on with this today as well.

Later that day, our 30mm screws arrived meaning we could secure the base together. In the afternoon Cam and I pieced together the base and began to router it's edges.

Firstly, the PVC pipes: back when we had done the CAD drawing, these were drawn as 384mm tall. The screenshot to the right shows that we had planned to put holes in the underside 18mm bench layer to make it lighter. We thought since we are already adding holes for the PVC pipe, to make it more secure we would keep the bench top as a solid layer. The baluster in the right-hand screenshot (marked by the cross in it) is 384mm tall, but as you can see the actual distance between the base layer and bench is 366mm, so this was the new height of our decorative bench legs. This was the measurement for our PVC pipes to be cut at.



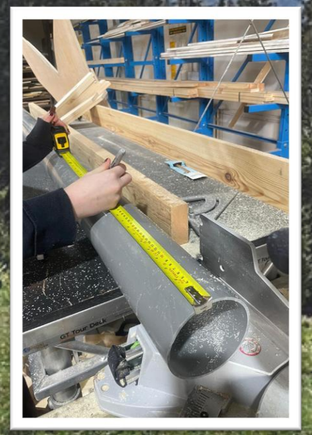


Construction

We began at the end of the pipe that didn't have the flared end and cut off the small indent lip to have a straight piece of PVC to start with. As we made our cuts along the pipe, measuring and marking 366mm, then lining it up with the chop saw and measuring from the blade to make sure it was in the right place, we realised the flared end at the other end was stopping the PVC pipe from laying flush to the fence, so we cut off this end too.

This cutting process was a little more tricky than we anticipated because the pipe was slightly too large in diameter for the Chop Saw to slice the whole way through it, so we would have to make an incision part of the way, then rotate the pipe to cut it again. It was a challenge to get the second cut in exactly the same place, as we were holding a smooth cylindrical object to the fence which meant it could easily slip out of place. As the pole got shorter, we added a stop block to stop the pole from slipping. Despite our best efforts, our cuts didn't come out to precisely 366mm, most of them were 367mm, but we felt that was okay as we would need to sand them where the two cuts didn't completely line up. The images below demonstrates our process:



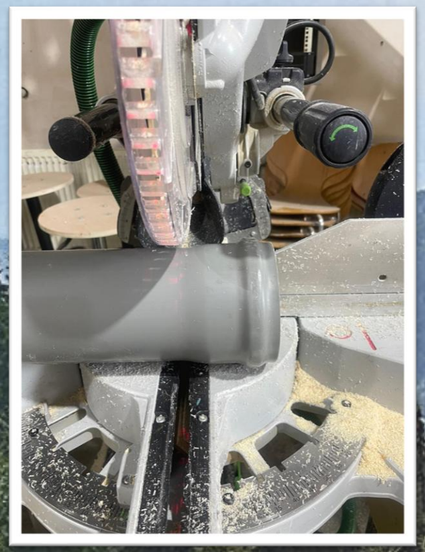





From left to right:
1 and 2. Getting rid of the lip indent on the end of the pipe
3. Measuring our cuts with a tape measure and marker pen
4. Lining up the blade to the mark and checking the distance from the saw to the end of the pipe was 366mm
5. Checking the pipe after the cut and writing its length on the pole so later we'd know which pieces of pipe needed more sanding

Construction











6. And 7. Noticing that the flared end of the pipe was stopping it from lying flush to the fence, so we sawed this off

8. Cam cutting into the pipe on the chop saw - we had to use more of a pushing down motion than forward motion as the Chop Saw couldn’t get over the pipe

9. Here you can see where we have had to rotate the pipe to cut again to get all the way through it

10. Using the stop block to help support the pipe as it got smaller. We thought of using a push stick, but this couldn't quite grip the plastic tube, so we used our hands to hold the pipe where it was safe to do so or the stop block.

Construction

Following this, we considered routing our 18mm arc base. We got out the smaller sized router and began looking at the different router head options. I then had a thought that this would be better to do after we have put the two layers of 18mm that make up the base together, so we put this to one side. Since we now realised we can staple the box bench legs together instead of screwing them together, we began this process. We started by sanding the 144x366mm and 360x366mm cuts of 18mm plywood, using 180 and 120 grit sanding paper to get rid of splinters around the edges. Then, we loaded the staple gun with 38mm staples – we did have the option of these or 25mm but went for the longer ones for more security. We tested the 38mm staples and air pressure of the gun on two scrap pieces of 18mm ply before using it on our boxes, to check these longer staples wouldn't cause the wood to split.

For the boxes, we started with propping up the 366mm ply, laying flat with two pieces of 144mm below it, one roughly in place and the other positioned however it best supported the other side of the 366mm ply. Then we glued along the long edge of the 144mm plywood and placed the 366mm plywood on top of this at its edge. Then, after making sure there was a right angle where they join using a set square, we stapled it in place, first at either end, then adding two more along the join. We repeated this process for each join, making sure to apply plenty of pressure to the staple gun to fix the joins together, and making sure to double check each angle was square as we went.

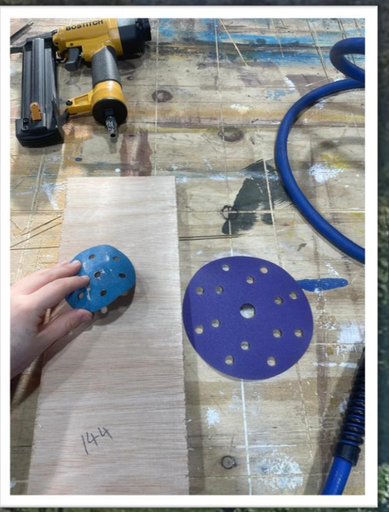




Looking at Router head options

Sanding the box cuts





Construction

On a couple of occasions, we missed the underside of the plywood, and the staple was visible from the inside of the box, this wasn't a problem for the overall look of the boxes as the staples were pocking through on the inside, but it does affect it structurally. I thought we could draw a guideline on the side of the wood we were stapling on by tracing the 18mm side of an off cut at the edge of the 360mm rectangles of ply, then Ant pointed out that the width of the staple gun head was pretty much the width of the 18mm ply, so if we lined up the staple gun parallel to the plywood, using the edge of it as a guide, the staples would sit in the right place.

Once the boxes were put together, I sanded them to flatten any overhangs caused by slightly off cuts when we rail sawed the 144x366mm and 360x366mm plywood. Now the box bench legs were complete and ready to be fixed to the base board.

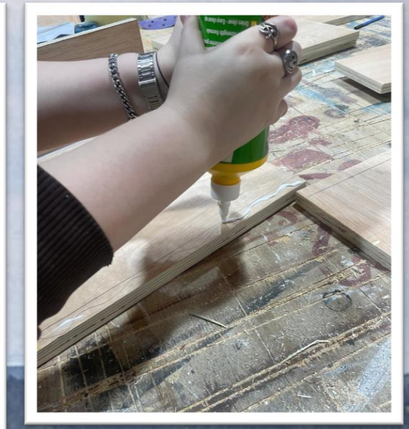
To make sure the base boards were ready for the next step, they needed putting together. By the afternoon our 30mm screws had arrived so Cam and I were able to put these together.



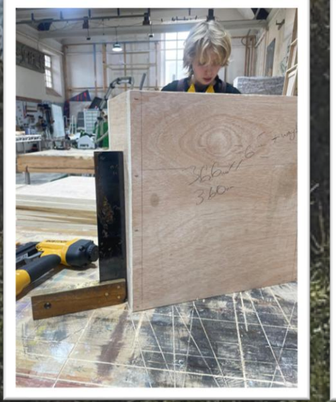
Our staple options, we went with 38mm.



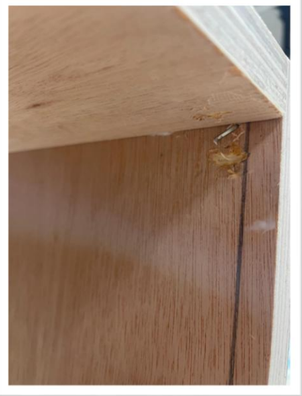
Making a test join to check the pressure of the staple gun



Gluing the join before stapling it in place



Checking the placement of the joins were at a right angle



A couple staples were in the incorrect position, we began drawing guides



As well as the 18mm pencil mark, you can use the width of the head of the gun as a guide.



4 staples running up each edge, we later realised these should have been across the grain, so started changing the position of the staples

Construction



Hammering in any staples that weren't quite flush

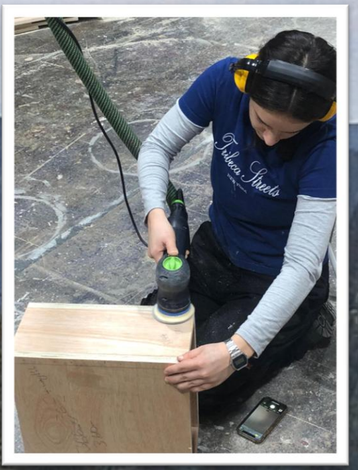
Marking parts of the box bench legs that needed sanding down, with a before and after







Using the small electric sander with grit 180 paper



Supporting the box as Ant uses the Staple gun, applying plenty of pressure from above so the staples lie flush against the wood





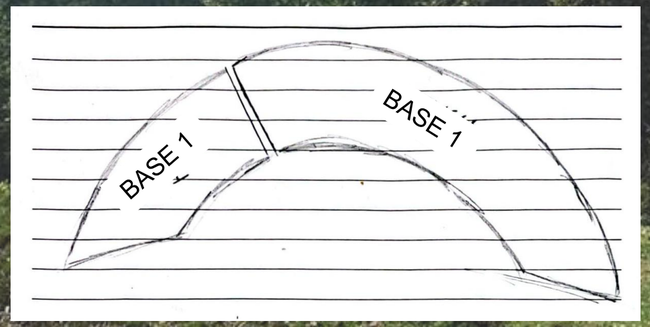


The bench leg boxes stapled together and sanded

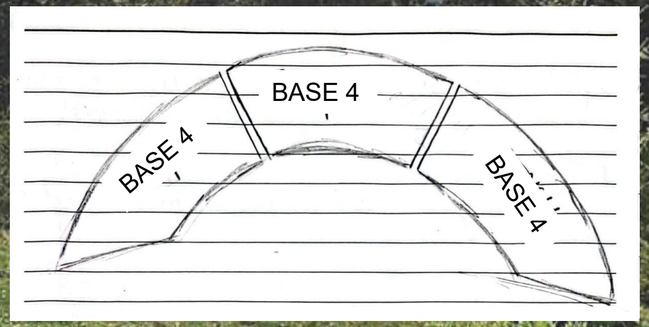


Construction

For the base layer of our Gazebo, we were doubling up two layers of 18mm. These 18mm layers were cut across two sheets of 8x4 foot plywood, as shown in the first illustration below. We stacked and labelled our 18mm ply cuts as base 1 and base 2 on top of this. Then base 3 with base 4 stacked on top of it - these made up the two base halves of the Gazebo. We made sure to flip the top layer of 18mm base layer so the divide didn't match up, which meant to keep them in place, they could be screwed together downward. However, when we stacked base 3 and 4, we found the fourth base cut out was short by 1cm. This could be because we mistook a pencil line for the 1cm perimeter, so cut it off. Our options were to either router the 3rd base layer so they matched or re cut the 4th base layer that was short by 1cm. Cam and I felt that routing it down by a cm would have too much of a knock-on effect to the rest of our build and measurements, making our technical drawing and model now different, and the Gazebo halves, no longer equal in length. We thought it would be better to re cut the 4th base instead. We ended up *Frankensteining* two 18mm scraps to make up the correct length for the 4th base (as shown in the second illustration below). This process involved using base layer 3 as a guide and placing it over the scrap ply for the 4th base to stencil it. Then we got the jig saw back out and cut the arc shapes out. Base layers 3 and 4 were put together in a similar way to layers 1 and 2, this time there were more divides in the arcs, but this was okay because none of them matched up so we were still able to screw everything in place.



What base arcs 1, 2 and 3 looked like in different parts



Base 4 which was re-cut from scrap 18mm into 3 parts

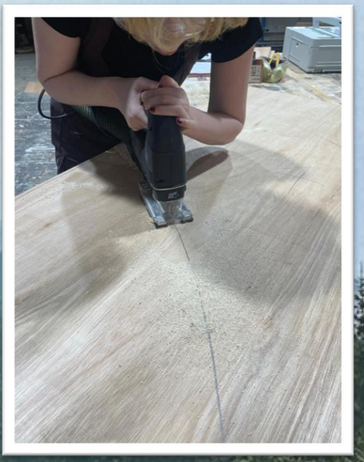


Here you can see where base 4 (the top one) was off by a cm



Placing base layer 3 on top of some scrap 18mm t trace its shape

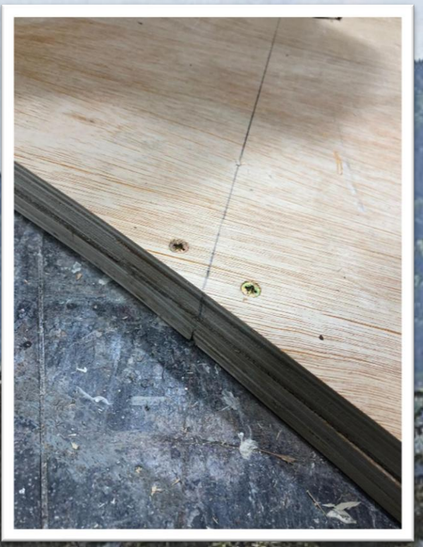
Construction



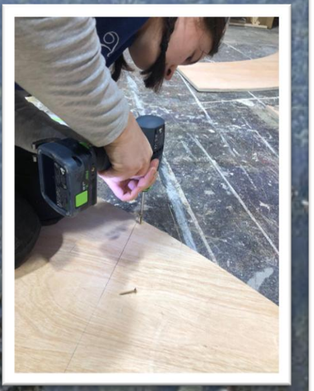
Cutting out the new base layer 4 pieces

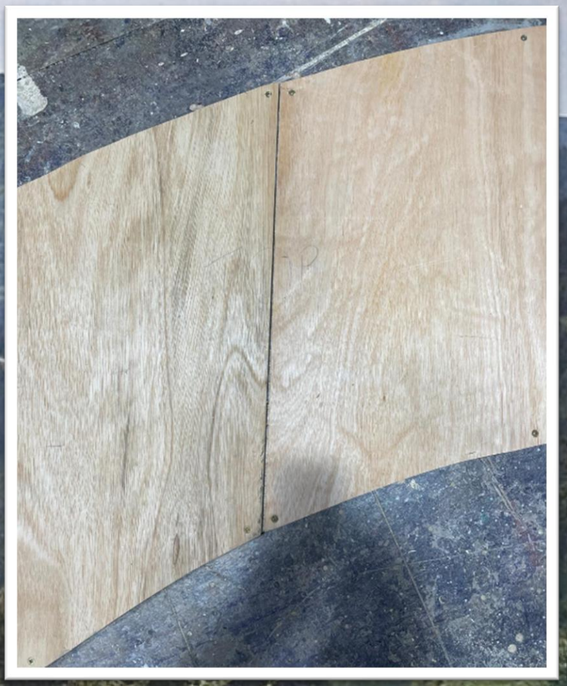


Making sure the joins don't match up across base layer 3 and 4



Marking a line where the divides are so we know where to add screws either side





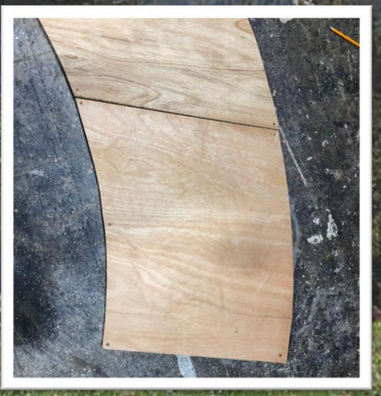
There were some gaps in the finished bases, but we can put filler in these to smooth them over







We applied glue to the perimeter of the cut pieces and their edges where they joined another cut. Then, we screwed in the corners of each cut, then along the length of the arc about 200mm apart, using 30mm screws.

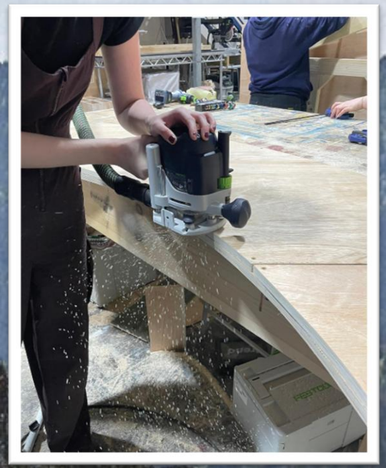


Construction

Now the base layers were glued and screwed together, we were able to router the bases. Our plan was to use a curved router head along the long edge of the arc. This means when it comes to skating (aka dragging) the Gazebo on and off stage the curved edge will allow the stagehands to tilt the Gazebo halves back a little to push/pull them along the floor, this means less surface area touching the floor which equals less friction and resistance.

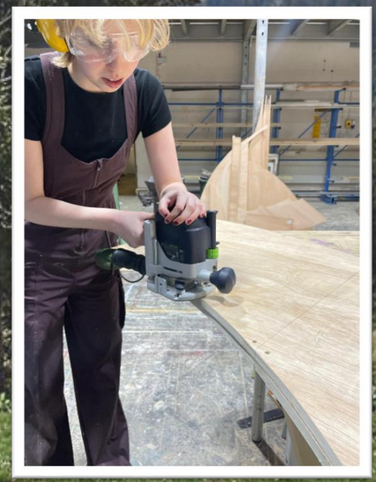
After an introduction to the router tool, we realised we would first be able to router the perimeter of our arcs with a straight router head so the two layers of 18mm match up. We thought we would have to do this with the electric sander which would have been time consuming - having to tidy up various overhangs of material. This was a quicker and more straightforward method. With the help of Dave, we fitted the straight router head, then made our way around the base layers working against the saw's rotating direction to trim the layers. For each layer we routed, we would flip and router again as the ball bearing below the blade uses whatever plywood is below as a guide to follow for where to trim excess. Routing the two halves twice with it once flipped meant there was no overhang.

On the 3rd and 4th base layer, there was a bit of a significant overhang that we left and decided to fill instead, otherwise the router would have taken away too much material and surface area of the base.





Cam and I taking it in turns to straight router the bases of our Gazebo





Part of the base layer including base 3 and 4 that we didn't router as the overhand was quite significant. We decided we would fill this instead.

Construction

On the Wednesday of our construction week (28th Jan), we had a ‘no power’ day as this was an unscheduled workday. To use this time to our advantage, Cam and I decided to make a sample board for the marble base of our Gazebo.

We had two references to recreate that Cam had sourced, one with a similar tone to the rest of our sandy Gazebo and one with a more reddish undertone to add some contrast to our build.

I made up the base coat for the sandy coloured marble by mixing Mylands Yellow Ochre pigment powder, a teeny bit of Bristol Burnt Umber and white and black acrylic paints to mute the terracotta-y shade. This was a mid tone of the reference which is the shade you start with for the base.

Once the base layer had dried, we recreated the base layer shade and made one lighter and one darker version and applied this in small blotches to the base layer. We tried blending this with a large lay in brush, but this caused all the different colours to mix into one shade. So, we let it dry a little first, then used more water on the brushes to hide our brush strokes, and I used a dabbing motion to blend the shades together in a more subtle way. We let this dry over night as our sample boards were now very wet. The next stage will involve using feather dusters.









Construction

On Thursday, we were down a member of our group again. Alaya, Cam and I began the day by revisiting our to do list, we decided to re-write it to make an updated version and we starred our key aims for the day. Alaya continued cutting out the Plastazote cone shapes and sticking them together, our Plastazote had arrived, so Alaya was able to complete this task (after a quick detour to B&Q for more Evo-stik contact adhesive). The Plastazote I had ordered was the cheapest kind which was the lowest grade – ECO40 or 10kg/m^3 and this was different to the Plastazote Anne had ordered. Anne had ordered their Plastazote from Polyprops and it's called CF100 (code for 100kg/m^3). Anne had intended to use it to build a sword prop hence its much higher density. Alaya was able to make 6 from the existing foam and 6 more from the new order of foam, this means we can use the better quality ones on the bench (more likely to get accidentally kicked or trodden on) and the lower quality and lighter foam cones for the join between the columns and the ceiling.

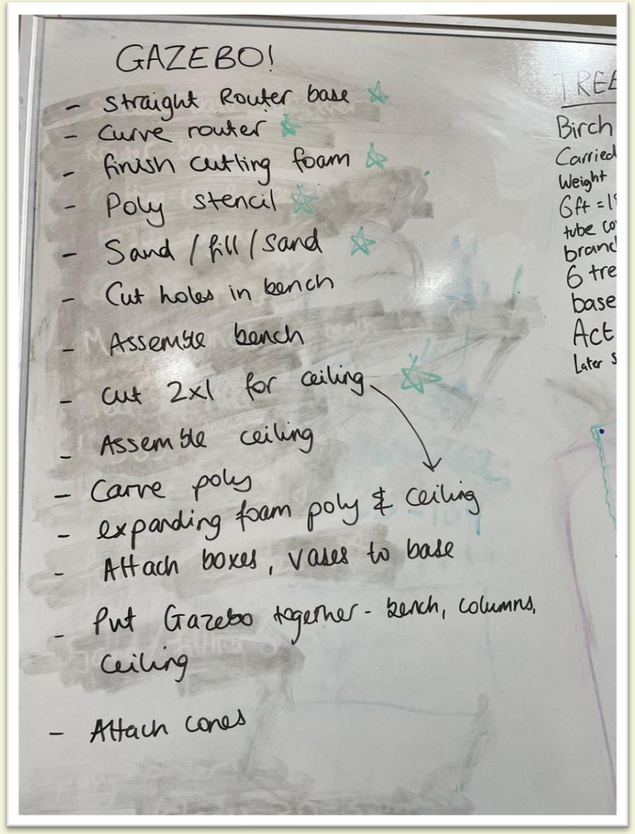


The contact adhesive we were out of that we should have checked we had in store



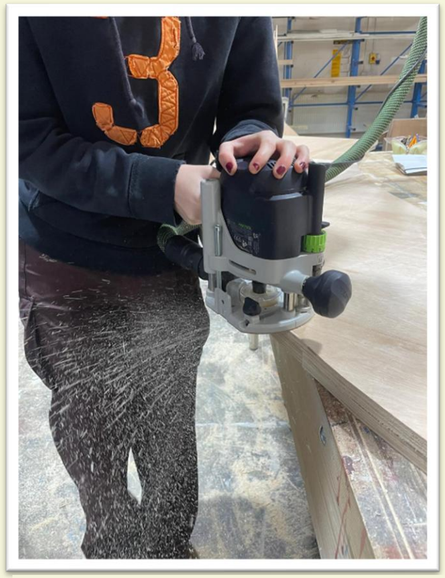
Here you can see the difference in thickness and quality between the Plastazote we ordered (left) and Anne's (right)





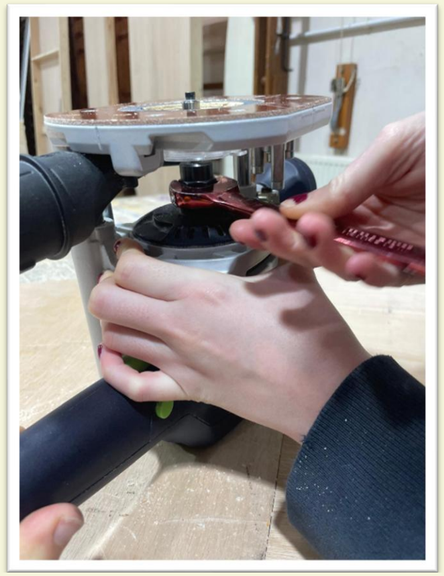
Construction

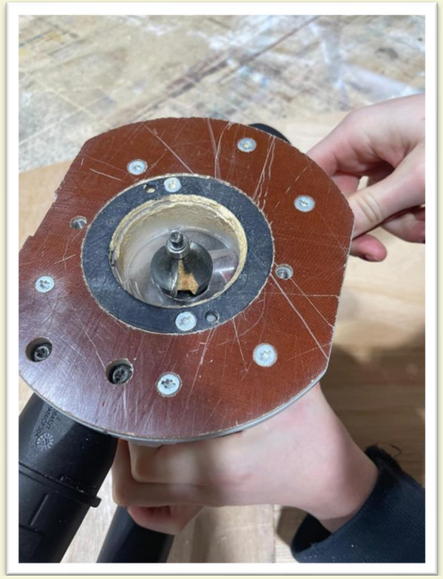
Whilst Alaya was doing this, Cam and I continued where we had left off on Tuesday by finishing the straight router on the second base piece, then changing the router head to the curved version to make a rounded edge on the underside of the back of the base layer. We trimmed the base facing down on the worktop, following the curve of the back of the arc. As we used this tool, we would occasionally get sparks from the blade going over a screw that wasn't completely flush with the wood, or too near to the edge of the wood causing the tool to router the screw slightly along with the wood. Sometimes the tool would catch on a screw, and you could decrease the pressure you are applying slightly, to allow it to pass over the screw.





First, we completed the straight routing around the base layers



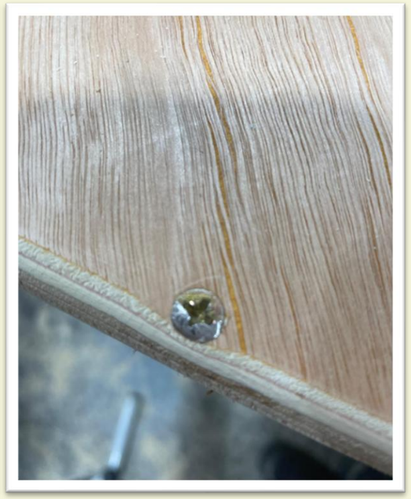


Then we changed the router head to a curved one and set the length of the blade, so the ball bearing sits within the 18mm of ply and the curve rests over the edge of the ply

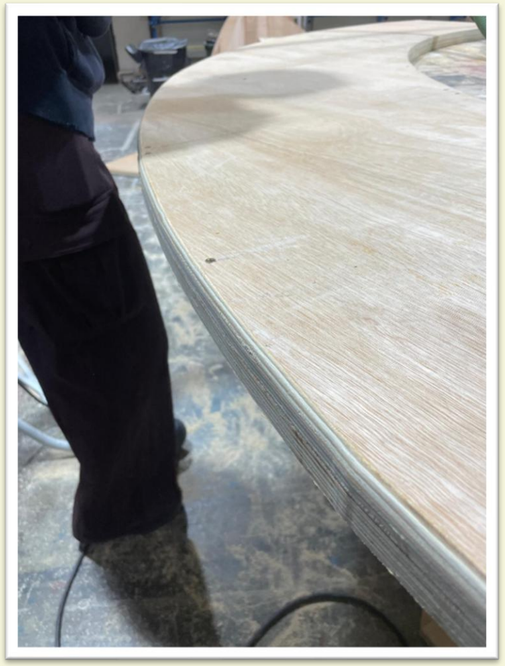
Construction

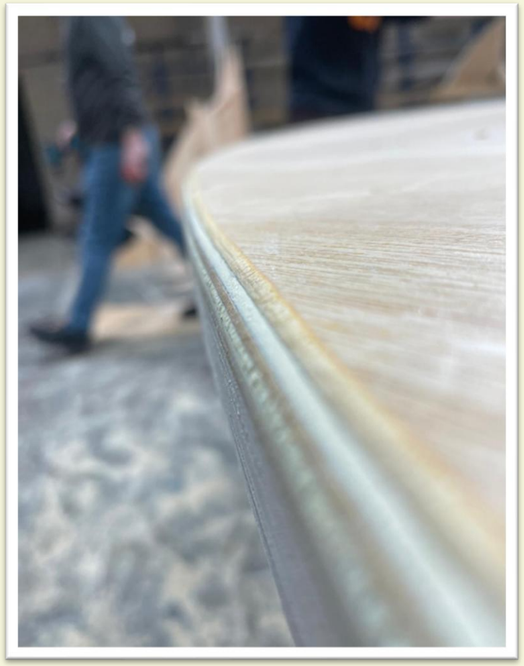






We put the side of the base layer we want to router facing up. Since the router blade was now working within the 36mm of ply, we didn't have to have the base layer hanging over the edge of the table. The Router tool was used just along the long edge of the arc. On the right you can see where the screws that were close to the edge, were cut by the router blade. Next time I would make sure to not screw too close to the edge if I knew I would be using a router tool.

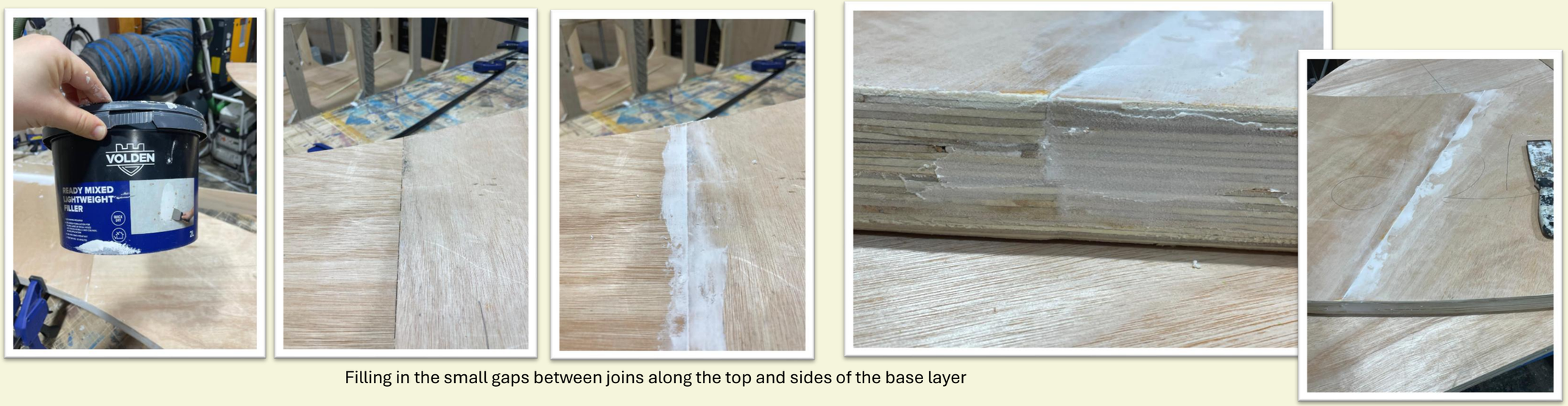




The finished curved router along the long edges of the base arcs

Construction

Next, it was time to fill and sand the bases. We used an electric sander first just to go over the edges of the wood where it was a little sharp like at its corners then, using a 1-inch filling knife and Volden ready-mixed lightweight filler, Cam and I worked on each base layer, filling in any gaps and impurities in the wood. We had coincidentally chosen to have the base layers facing up where there were no screws - we hadn't planned this (though we should have), we simply thought the arcs looked best in the way we had them before we began routing. It was a serendipitous moment of realizing we wouldn't need to cover the screws because there weren't any. On top of this, we had also now hidden the larger gaps on the underside of the bases that had occurred when we pieced the 18mm base layers together. On the right-side-up face of the base layer, we focused on filling the cracks where separate plywood sheets were joined together, as well as any mistakes made during the routing process, such as small dips caused by not holding the tool perpendicular to the wood surface.



Filling in the small gaps between joins along the top and sides of the base layer

Construction

We did have one slightly larger overhang that we had chosen not to trim with the Router as we felt it would have made too much of a difference to our design. So instead we filled it, with the help of others, Cam clamped a very thin piece of ply along the edge of the arc to create a mould, then we filled the gap with the ready made filler. This was quite a thick layer of filler so we left this to dry overnight, and we can complete sanding it on Friday.

Once the filler had dried on the rest of the bases, we were able to sand this. This time we did it by hand with a less coarse sanding paper, so we had more control. We didn't want to take away too much of the fillers effect, just neaten the edges of the dried filler so it seamlessly blended with the wood of the base.







Our ply and clamp set up to fill the larger gap

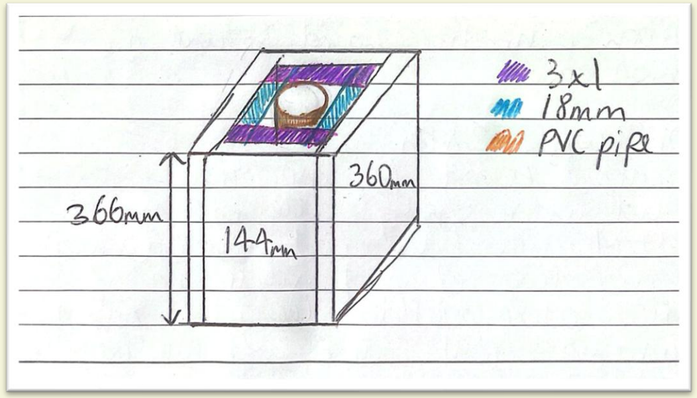


Once our filler had dried in other thinner areas, we were able to sand it down



Construction

We had a brief discussion after lunch about how we will secure the pipes inside the box bench legs. Dave and I tried a couple of different sized off cuts of wood and found that two 18mm pieces of ply fit snuggly either side of the pipe along the 360mm edge. Dave trimmed some left over 18mm ply to 324x366mm (the interior measurement of the long sides of the boxes) using the table saw. To support the pipe across the shorter 144mm gap, Dave chop sawed 4 pieces of 3x1 at 144mm length for each box to have two either side of the pole at the top and bottom of the box, so 4 in total. Our next step for these boxes will be stapling the 18mm and screwing the 3x1 supports to the inside of the box.

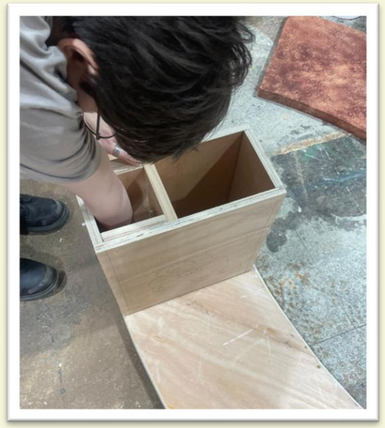


My quick sketch here isn't fully accurate, there is space between the 144mm and the 3x1 toggle that supports the pipe, but this is the layout of the support structure. Later, we realised we don't want the PVC pipe in the middle of the table leg box, but toward the back edge meaning we can use just 2 cuts of the 3x1 to hold the pipe to the inside back of the box.









Construction

For the ceiling arcs, the bottom and top pieces had been cut from 3mm plywood to keep them light. These needed cladding with timber between the two layers of ply, lining the arcs edges, and toggles running along the width between the 3mm arc layers. We had ordered 2x1 to do this, the 2-inch side made up the depth of the ceiling piece, and the 1-inch sides will be fixed to the insides of the plywood.

Firstly, we needed to trim the 3mm arcs lengths as this hadn't been finished earlier in the week, we did this by laying the 3mm ply on the bench layers that they're meant to match the length of and marked the excess that needed removing. We decided to place bench 1 and 2 with ceiling pieces 1 and 2 and so on. We then rail sawed off the excess.

As Cam completed the sample board for the marble – using a dry sponge for one method and then a wet sponge on the other sample, I began chopping 2x1 to 600mm in length for the ceiling lining. I used a stop block for this and made sure to measure after every cut to check the stop block hadn't shifted and my cuts were accurate. After chopping up a few pieces of 2x1, I paused here to see where they could be placed and if 600mm was the correct length I should be using. Once Cam had joined me, Dave spoke to us about how we can Mitre the joins, so they affix completely along the 1-inch ends. This makes the 2x1 beams more supportive than if they were stapled to the ply in separate blocks.





The rail sawing that still needed to be done on the ceiling arc edges





Making a stop block at 600mm on the Chop Saw

Construction

Cam and I found that at times, the 600mm lengths were too long to sit close the shape of the arcs edge, so we began working along the curve and measuring the correct sized lengths, these ranged between 250-600mm. Once I had cut a new piece, we measured the angle using an angle finder. To get the mitre angle from this you subtract 180 from the angle. For the first angle (between cut A and B), the angle finder gave us 162°. 180-162= 18, 18/2 = 9 .
9° is the angle we rotated the chop saw to, to mitre the edges of 2x1 between join A and B.

We repeated this process as we went, measuring suitable lengths of 2x1 to be cut to, then sitting it next to the previous cut at the angle we want it along the curve, and measuring this angle with the angle finder. It wasn't until the angles between cut H and I, that we realised there is a mitre button on the angle finder that does the maths for you. Our angles were as followed:

Inside curve:
A to B: 162° = 9° mitre
B to C: 171°= 4.5° mitre
C to D: 162° = 9° mitre
D to E: 0°
E to F: 158° = 11° mitre

Outside curve:
G to H: 163° = 8.5° mitre
H to I: 166° = 7° mitre
I to J: 166° = 7° mitre
J to K: 161° = 9° mitre







Construction

On Friday, we began the day again with a group check in, we were down a person again due to illness, but that was okay as we could assign roles as either two person or one person jobs so that we would make some good progress. We looked at our to do list and re did it again with a rough numbered order to follow.

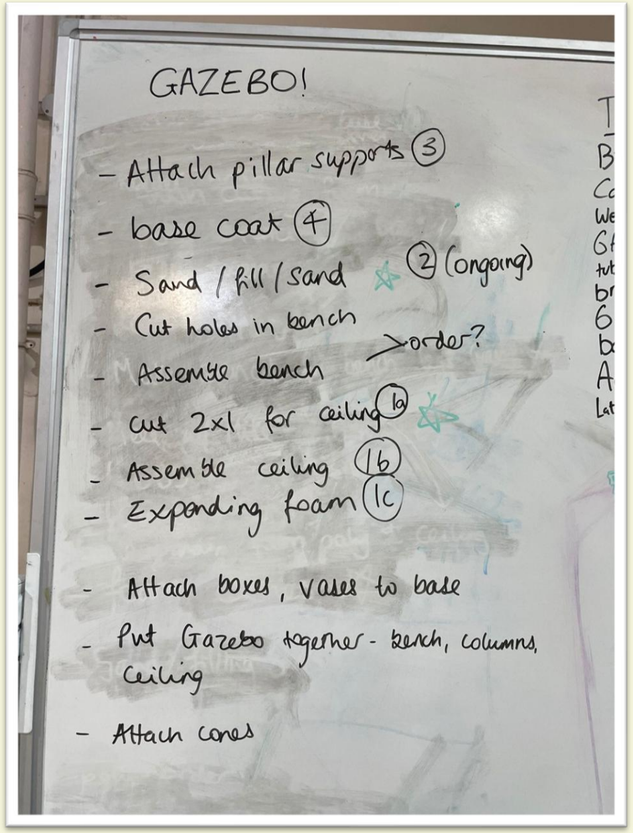
Cam and I continued our process of putting the second half of the gazebo ceiling together. We would cut straight pieces of 2x1 then line it up with the arc to take the angle measurement. Using the mitre measurement, we would mitre these so they would sit flush to each other.

Our angles for this second part of the Gazebo ceiling were as followed:

Inside arc:
1 to 2: 158° =11°
2 to 3: 173 = 3
3 to 4: 159 = 10
4 to 5: 166 = 6.8
5 to 6: 169 = 5

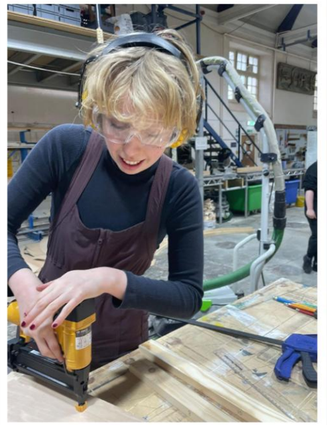
Long arc:
7 to 8: 164.5 = 8
8 to 9: 170 = 4.5
9 to 10: 169 = 5.5
10 to 11: = 162 = 9
11 to 12: = 165 = 7.5

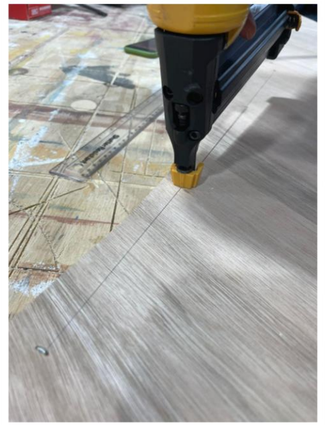
Once the 2x1 rail pieces were cut out and mitred, we moved one half of the ceiling 3mm pieces to the workbench to fix the rail and 3mm ply together.



Construction

To fix the 2x1 to the 3mm ply, we debated between 38mm, 25mm and 12mm staples. We went with the smallest for the staples that went through the ply to the 2x1. For the stapling process we had to clamp the 2x1 in place where we could see where the 2x1 cuts matched up with their correlating outline, then flipped the ply over to staple it. applying pressure downward.
At some points we stopped flipping the plywood over and stapled along the 2x1 from the underside of the 3mm, this was because it was easier to line up the staple gun with the 2x1 facing upward and, it was easier to see that the 2x1 was in the correct position we had traced around during the cutting and mitre process, from this angle.













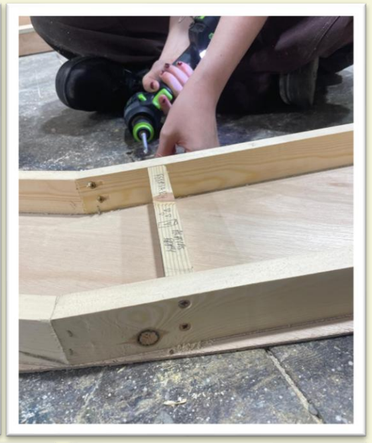
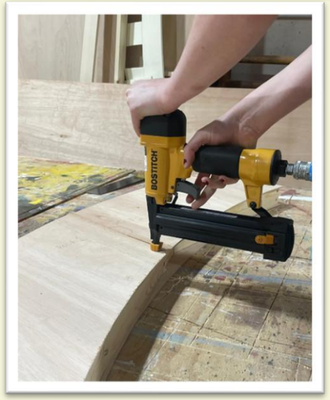
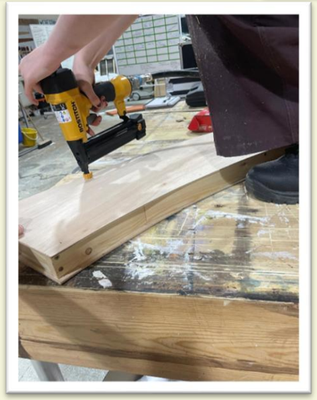
To secure the 2x1 ply to each other along the mitred joins, we tried screwing them together, by first creating a small pilot hole, then adding the screws at an angle. We found the screws would split the wood and stick out quite a bit at the side which we wanted to be able to conceal with expanding foam. Instead, we decided to use staples and hammer these in to sit flush against the 2x1.

Construction

On Saturday January 31st, Cam and I came in to screw the toggles in place on the ceiling arc. We used 4x40 mm screws to screw through the rail into the toggles, adding two screws on either side of each toggle to secure them properly. Once these were fixed, we used 12mm staples to attach the3 mm plywood lid over the top.

After that, I moved on to the benches to finish routing them. I started with the straight router bit, then switched to a curved bit to round off the edges. I flipped each bench to router both sides, creating a ‘C’ curve facing inward along the edges. Before changing the router bit, I made sure the router was completely disconnected. I used a 19mm wrench, held down the lock release, and unscrewed it to release the double lock system. Once the curved bit was in place, I adjusted the height so the wheel bearing sat within the 18 mm plywood, allowing it to use the plywood edge as a guide to cut a consistent rounded edge.

Alaya had previously filled some of the gaps and small dents left from the jig sawing process with wood filler. Once this had dried, I sanded it back, making sure everything was smooth and blended neatly into the rounded edges of the benches.


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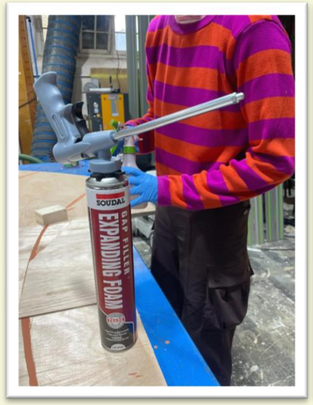
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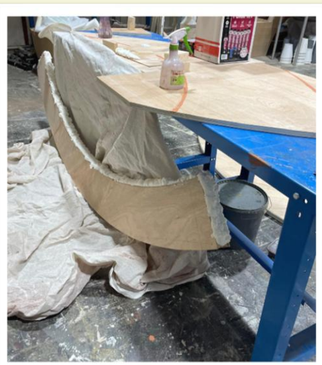




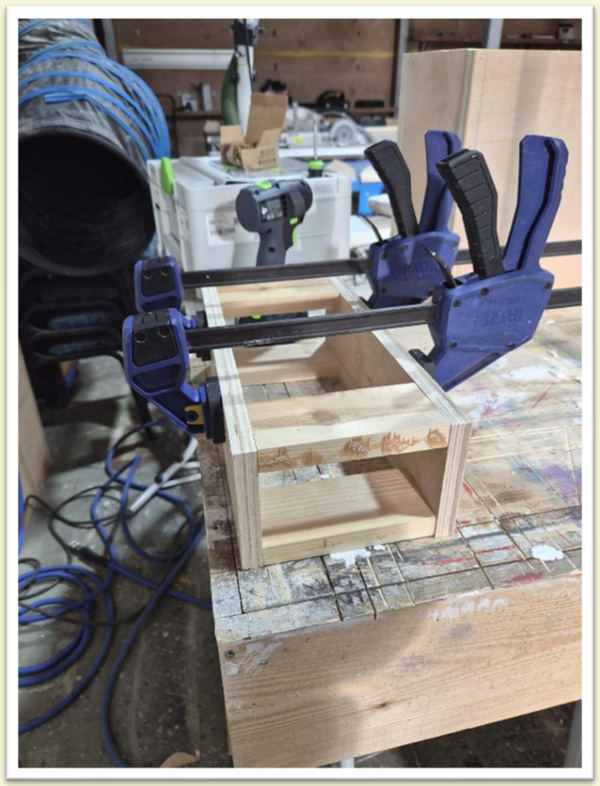

Construction





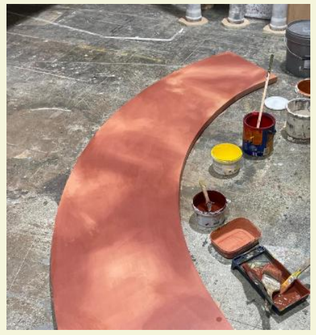
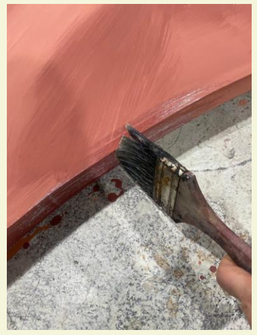

Cam adding the expanding foam along the sides of the ceiling arcs




Alaya putting the interior bench leg supports in place for the poles. She screwed these together, then slotted the supports inside the boxes and screwed them in place

Construction

On Sunday February 1st, I came in first thing to apply a glaze to the base arc. On this day, Cam and I came in intermittently to add coats and glazes to the base arcs. First, I used Flints gloss glaze and applied this with a 76 mm lay-in brush to build up a well-covered base. Once this had dried, I made a deeper marbling shade, I first added Bristol Burnt Umber. This didn't create enough contrast with the existing colour, so I then added Bristol Raw Umber, which is a similar earthy brown but slightly darker. I worked slowly, adding very small amounts at a time so I didn't make the mix too dark too quickly. Even after adding more, there was still very little difference. I think this was because it was a ready-mixed, watered-down paint in the tub, so it was quite thin and not giving a strong pigment. I found the same issue with the Rosco black we had in stock, as this was also pre-watered down and didn't shift the tone much. In the end, I switched to black emulsion, which we had plenty of. I added a generous amount, as emulsion isn't as pigment-heavy as Bristol or Rosco scenic paints, which are made to be diluted many times over. Once the lighter sponged layer had dried, I applied the darker shade over the top using a natural sponge. I started with the sponge dry, dabbing it into the paint and then onto the tray to remove any excess. I gently dabbed the surface as I worked my way along the arc, stepping back regularly to check for any obvious gaps. I made sure to vary my movements by rotating the sponge and using different edges so the finish looked more natural and less repeated. Before leaving the workshop, I checked with the porters about putting the heater on a low setting. From past experience in scenic art, I've found that glaze can bloom and dry unevenly in cold conditions, so I wanted to make sure the temperature stayed consistent while it cured.





Construction

Later, Cam came in to add a glaze over my sponged layer and to sponge a lighter beige shade onto the now dry, blended base arc. We added glaze layers between coats of paint to build up depth, similar to real marble, as the shine helps create that effect. This method of applying thin layers of paint and glaze to build texture and variation is known as scumbling, which is a common scenic art technique.
I came back in with Cam later that evening to sand the dried filler on the ceiling arc. I used 120-grit sandpaper with the electric sander, going over the edges of the foam-cladded plywood and smoothing the corners so there were no sharp or potentially harmful edges. In some areas where the expanding foam had been applied quite thinly, it pulled away from the plywood while sanding. This may have been because it hadn't adhered properly to the wood, or because I should have hand sanded those more delicate sections rather than using the electric sander.

Cam returned again later to glaze one of the base arcs and add a darker sponge layer over the lighter beige that had been applied earlier in the day. The aim of coming in over the weekend was to complete these smaller jobs that required short periods of work but longer drying and curing times. This meant that when we returned to the workshop as a group the following day, we could make quicker progress toward being able to assemble the Gazebo, as the bench and ceiling layers were now finished and the base just needed the Schlepitchka technique applied. Over the weekend, Dave also went to look for a hole saw that would allow us to cut the holes in the benches for the 110 mm PVC pipes to slot through. A hole saw is an attachment fitted to a drill, but we thought we might need a more heavy-duty version than the one normally used in the workshop for large circular cuts. We had the option of a 110 mm diameter blade or a 114 mm blade, and Dave suggested using the 114 mm so the poles would be easier to line up and feed through the bench.



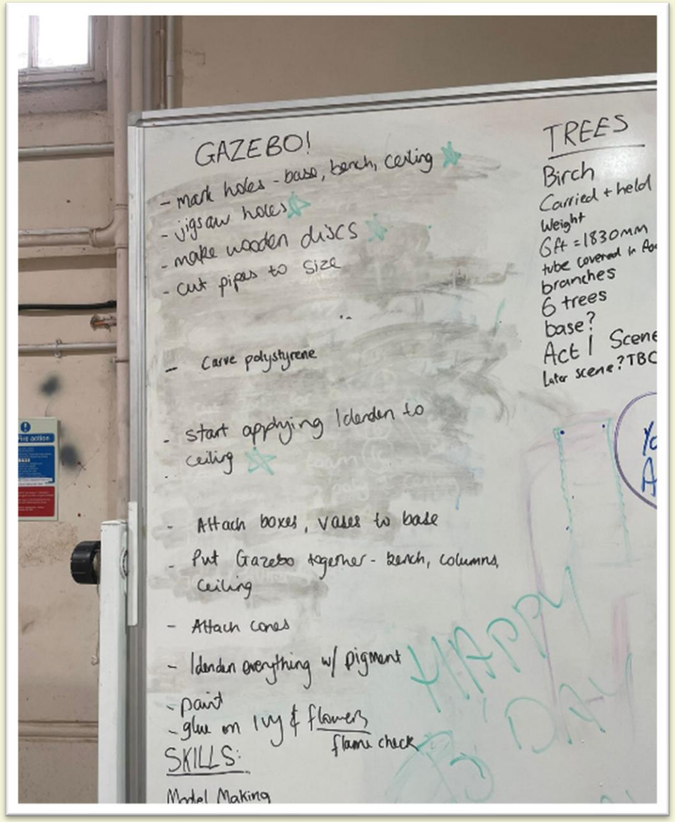



Construction

The next day, on Monday the 2nd of February I had hoped some orders had arrived. We were still waiting for the:

- PVC pipes x2 from Pembroke Building Supplies - We had ordered these earlier but forgot to account for the balusters which required an extra two pipes for when they were 384mm long. Now that we are not cutting holes out of the underside of the benches to make them lighter, and the balusters are now 366mm tall, we would only need one 3000mm pipe to make up for the amount we were missing, but 2 were on the way.
- Feather dusters from amazon – these were to create the marble effect on the base layers. We wanted to do this as soon as, the idea of painting the marble on the base before assembling the gazebo was to make it look mire natural. With the box bench legs in the way, it would be hard to use the feathers effectively.
- Polystyrene from Custom Pac – this was another item that we wanted to have carved and slotted over the 366mm pipes

Dave chased up these orders and in the meantime he suggested using peacock feathers we had in stock if we were feeling pushed for time. I also asked him to chase up the Evergreen Direct order of Ivy which will be for both groups. He also checked the Polystyrene, which was shipped today so we are hoping it arrives Tuesday so we can carve the Balusters.

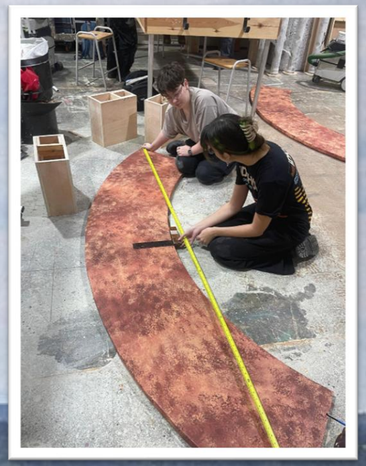


Construction

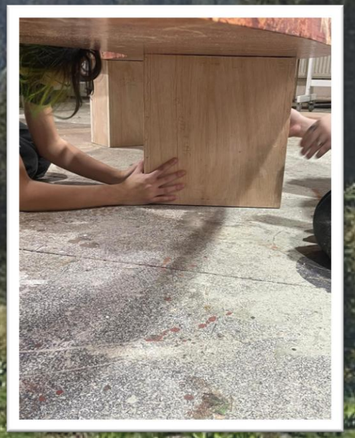
Whilst we waited on the polystyrene order, to begin assembling the Gazebo, we measured and marked out the placement for the bench legs on the base layer. First, we measured the width of the base from the furthest outside corner to the opposite outside corner along the arc to find the midpoint, and marked this on the edge of the base layer. We then measured each bench leg, although they were meant to be 180 mm wide, there were slight millimetre differences between them, so we measured each one individually and marked its midpoint. We lined this up with the midpoint mark on the base to position the centre bench leg accurately. For the two legs that sit under the ends of the bench, we measured 50 mm in from the straight edges of the base. Like with the centre bench leg, we found the midpoint on the box leg and straight edge of the base and marked it. The side of the bench leg was designed to be 480 mm wide, but after jig sawing, routing, and sanding, the measurements had shifted slightly, so we checked each one rather than relying on the original dimensions in the CAD drawing.

Once each bench leg was positioned on the base layer, we drew around it in pencil and marked each rectangle with a symbol that matched the corresponding bench leg. We had grown tired of using numbers and letters, so we switched to star signs to label them. To prepare for cutting the pipe holes in the bench layers, we also needed to transfer the bench leg positions onto the underside of the benches. We placed the benches on top of the base and legs, using the baluster pipe cuts to find their placement as these were shorter and easier to work with for this. Then, pencilled around each box leg underneath, again marking them with their matching symbol. Ant and Alaya were then able to begin cutting the holes for the poles in the bench layer. They used a jigsaw as we had decided against the hole saw for better accuracy. Ant and Alaya managed to keep the circular offcuts neat and even, which meant we could reuse them later as a kind of socket for the poles to sit into within the ceiling layer.









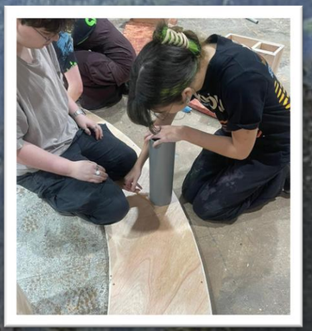


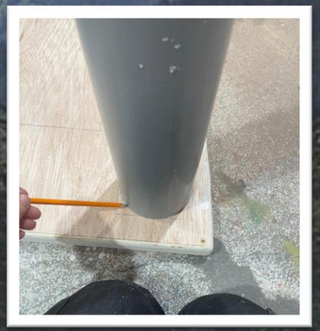
Construction

After they had completed this, they cut the leftover 18 mm plywood into 75 mm squares to give the 366 mm baluster pipes something solid to fix to. This also provided a larger surface area, helping the pipes to be more securely attached to the base layer.

While Ant and Alaya carried on with those jobs, Cam and I decided that instead of waiting for the feather dusters to arrive, we would use the peacock feathers we already had in stock to continue painting the marble base. At this point, we had a two-tone blended layer made up of beige and terracotta shades. Cam applied these in more concentrated areas of each colour and then blended them together to form the base layer of the marble effect. Once this had dried, we applied a gloss glaze. The aim was to build depth and create visible layers between each stage, as we didn't want the colours to fully blend together but rather sit on top of one another. However, despite its name, the gloss glaze dried quite matt. I suggested adding a small amount of metallic or shimmery pigment to bring back some sheen, but we were aware this could risk making the finish look unnatural.
After the glaze had dried, we sponged on a lighter beige by adding white to the lighter base shade and dabbing it on with a natural sponge. It was important to constantly change the direction and angle of the sponge to create a random, speckled effect, and to remove any excess paint before applying it to the surface. For the darker areas, we used the terracotta shade mixed with burnt umber, as we wanted this to be the darkest tone within the base layer. Burnt umber alone wasn't darkening it enough, so I added Bristol Raw Umber, but this also made very little difference. It looked as though it had already been thinned down in the pot, which affected the strength of the pigment. I then tried adding small amounts of Rosco black, but this too appeared watered down and didn't shift the colour much, no matter how much I added. In the end, I used black emulsion. This required a fair amount, as emulsion isn't as pigment-heavy as Rosco or Bristol scenic paints, but it finally gave us the darker shade we were aiming for.











Construction

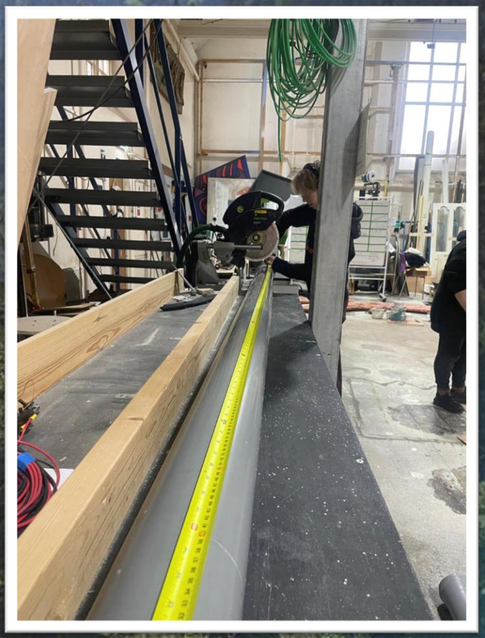
Using the same technique as the first sponged layer, we dabbed on the much darker shade. While working at the same time on the base layer, Cam and I would constantly swap places and change the direction we were working in. This helped blend our slightly different application styles and the natural differences in our sponges, so the finish looked more unified. We also made a point of stepping back regularly, and at one stage even viewed it from the mezzanine, to see it as an audience member would. From a distance, it's much easier to spot blank areas or repeated patterns that have accidentally formed. Once these top sponged layers had dried, we glazed them again. I didn't get many pictures of this process as Cam and I were concentrated on getting the sponged layers complete.

Next, we moved on to using the peacock feathers to create the vein-like effect of marble. In between waiting for coats to dry, Cam and I also cut the PVC pipes down to the correct height for the gazebo. We had told our director the structure would be 10 foot, which is roughly 3048 mm. We knew we needed to square off the ends and remove the cone-shaped section at the bottom of the poles. To calculate the correct length for the columns, we worked out 3000 mm minus 36 mm (the height of the base), which gave us 2964 mm. One of my cuts came out slightly short at 2960 mm, so we had to trim all of the poles to match this measurement. This happened because I didn't account for the width of the blade. It's not a mistake I would usually make, but I think it was just tiredness at that point.









Weirdly, the pipes had arrived at slightly different lengths. Despite this, we had plenty of square PVC pipe length. We began with squaring off the ends, removing the conical base, then measured 2964mm and marked this on the pole for chop sawing.

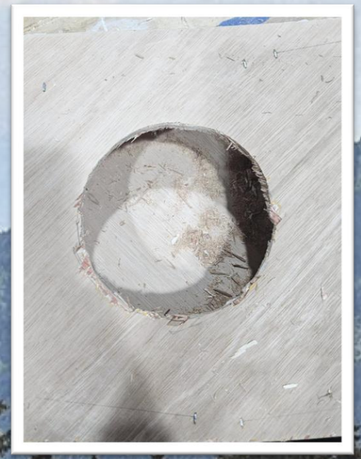
Construction

Some images from Ant and Alaya's process, they cut out the holes for the pipes in the bottom side of the 3mm in the ceiling arc, and through the bench layers.

When Cam and I put the toggles into the ceiling arc, we forgot the end ones would obstruct the poles that slot into the ceiling, we had managed to plan to place the centre columns between toggles, but for the end ones, Ant had to cut thought the ply and part of the toggle as shown in the bottom left image.

For this, he used a cut jigsaw blade at the length of the width of the inside of the ceiling arc so he wouldn't cut all the way through it.

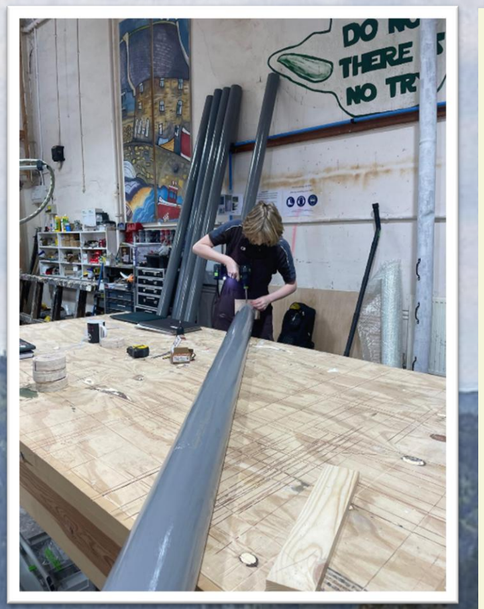












These stages were happening simultaneously to Cam and I's progress. We found splitting the work-load into two for us to complete in pairs was a very effective way to get through our to do list as we were able to complete two tasks at once.



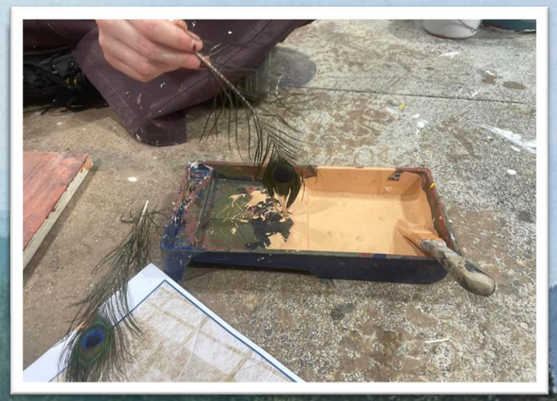
Since Ant cut out the bench holes in one neat cut, we were able to use these discs in the inside of the columns at their top end, to help give them more surface area for when we screw the ceiling onto the columns at the get in.

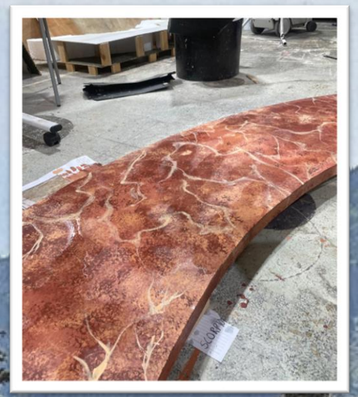
(Top right) Cam screwing in these 18mm off cuts to one inside of the columns, we used a long piece of softwood slotted into the pipe to push against the disc so it could sit flush to the other end of the pipe

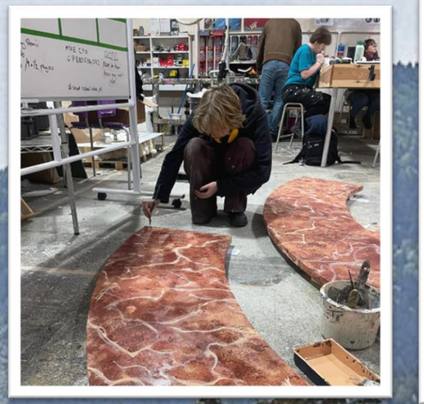
(Bottom right) This shows how Ants sawing of one side of the 3mm allowed the pipes to sit within the ceiling arc.

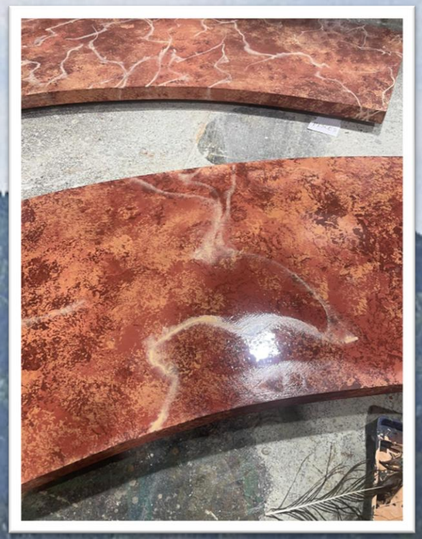
Construction

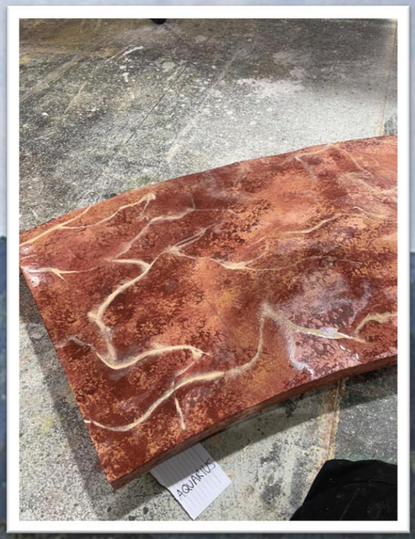
Pulling the feather in alternating directions allows the bristles to fan outward and make thick, natural looking stone veins. The water on the surface also allows the veins to bleed and feather, blending into the background rather than having strong defined edges.

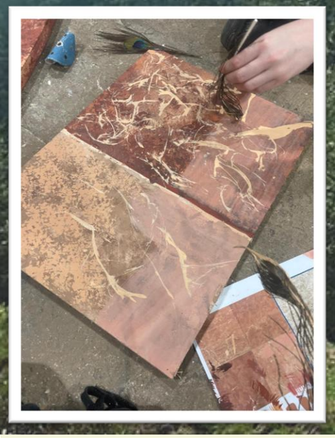


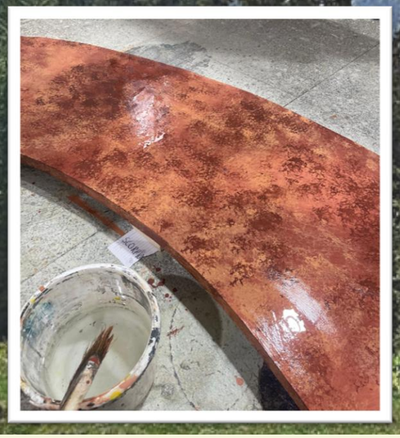




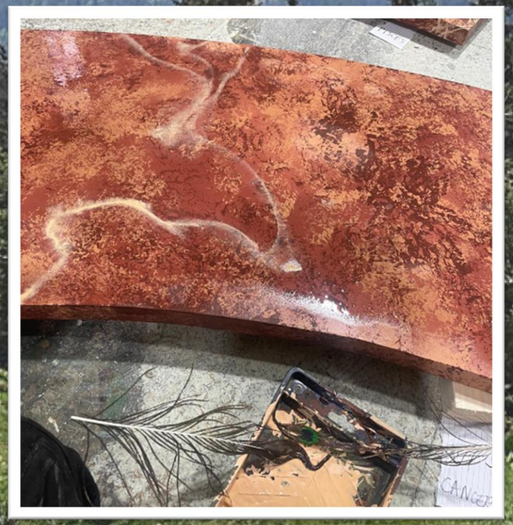




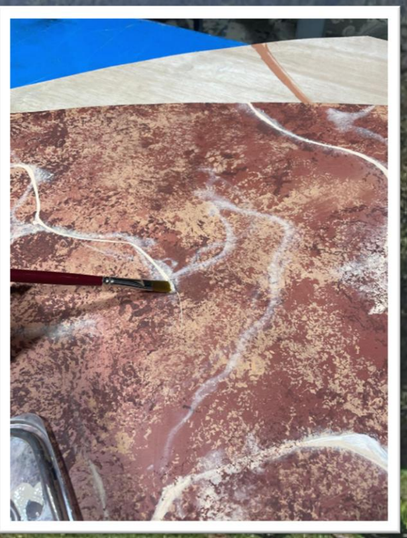


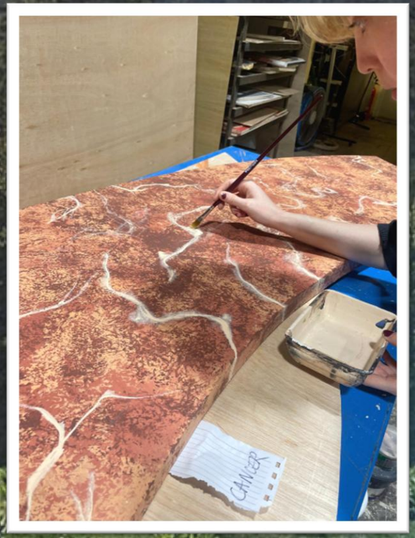


We tested the peacock feathers first on our sample board, then wetted down the base layer before applying the veining effect.



Once the feather markings and glaze had dried, we added some highlights using a paler beige by mixing in white and lining brush

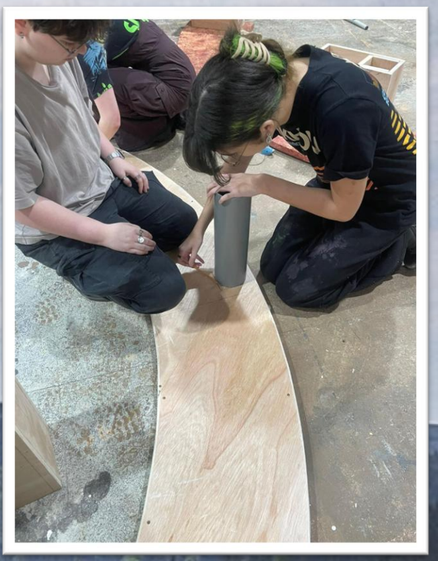


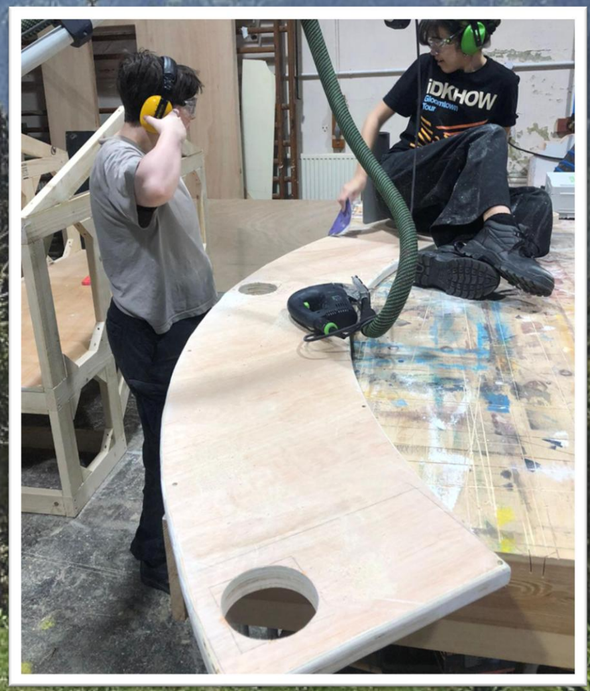


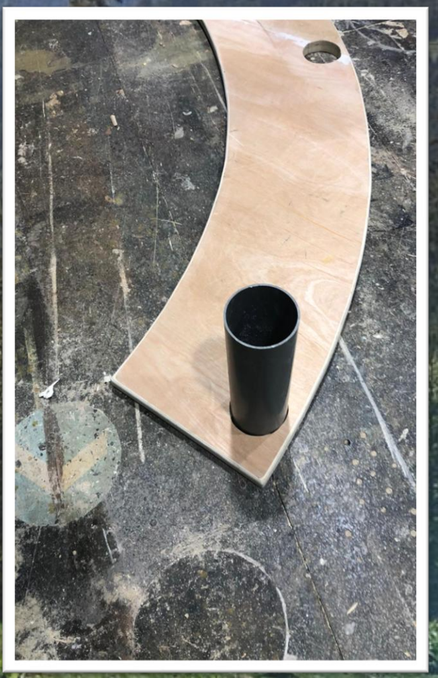
Construction

On Tuesday the 3rd February, now that the feather effect on the bench had dried overnight and before applying the final gloss glaze, we positioned the base with the box bench legs in place so we could slot in the smaller pipes. For now, this was just to mark their positions on the ceiling, allowing us to pencil around them and identify where we needed to cut the pipe holes in the ceiling arc for the large columns to slot into. While Ant jig sawed the ceiling holes, Alaya sanded the inside pole supports of the boxes, as we had realised during the mock up process of how our poles, bench legs and bench fits together, that they were a tight fit. She focused on sanding along the straight edges to make slotting the poles into place easier. Meanwhile, Cam and I used the chop saw to cut the final PVC pipe that had arrived down to 2460mm, as the final column.













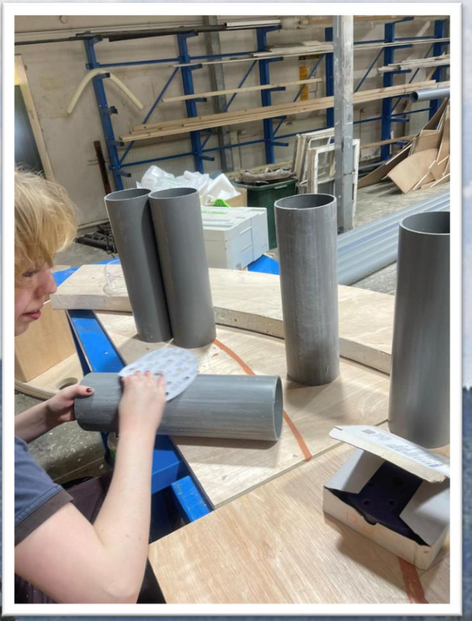
Construction

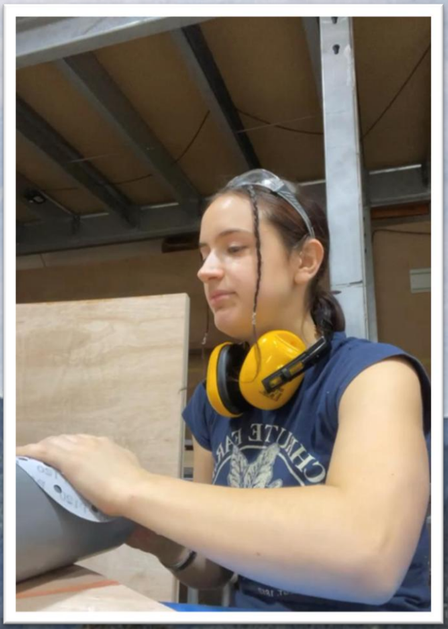
Tuesday was a busy day of adding the final touches to our separate components so we could finally put the Gazebo together as a unit and begin applying texture and paint to the build. After cutting the final column down, Cam and I moved onto keying the outside of the 366mm PVC pipes to give the expanding foam some texture to grip to. We used 120 grit sanding paper and did this by hand as the electric sander was being used, we made sure to sand the pipes in multiple directions to give the pipes a thoroughly roughened surface.

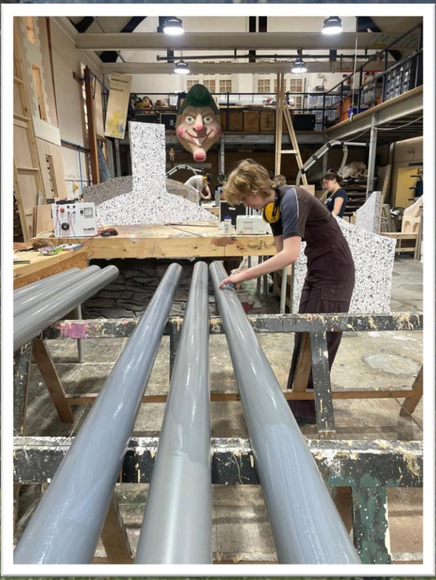
Next, Cam and I primed the pipes to be the Gazebo's columns. This was to prepare them for texturing with Flintex. For this we laid the pipes down on the fold out sawhorse tables and added Covent Garden primer.

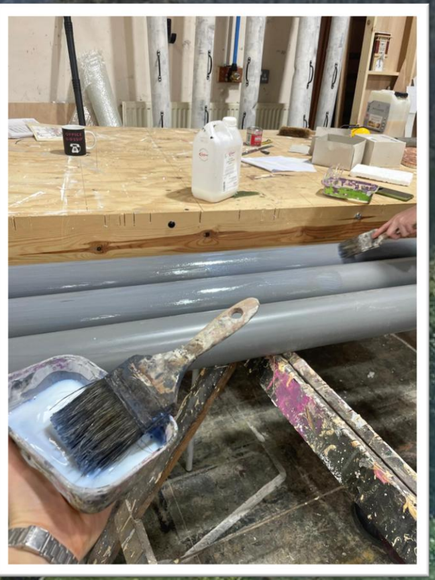
After this, Cam and I moved onto screwing the square plates to the top and bottom inside of the short PVC pipes. This was so there was a surface to secure the baluster pipes to the base and underside of the bench.

The last thing we did on Tuesday was put together the base, box bench legs and bench. We did this by putting the boxes on the floor first, then the base layer upside down on top of this. We moved the boxes to where they were traced around on the base layer, then screwed these in place from the base layer downward. Then, we flipped the unit over and placed the bench layer down and screwed the bench layer onto the top of the boxes. We repeated these steps for the second half of the Gazebo.

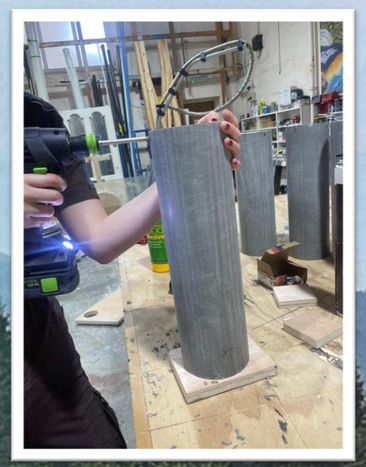


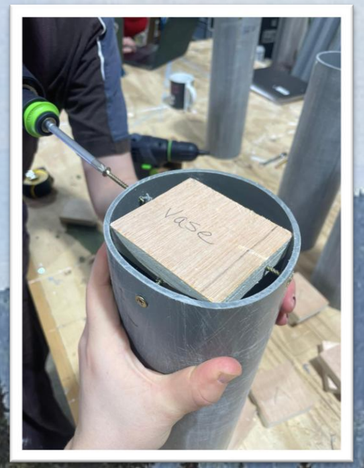




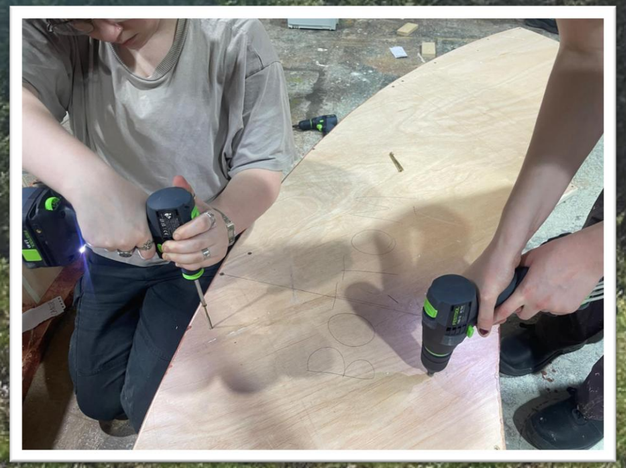


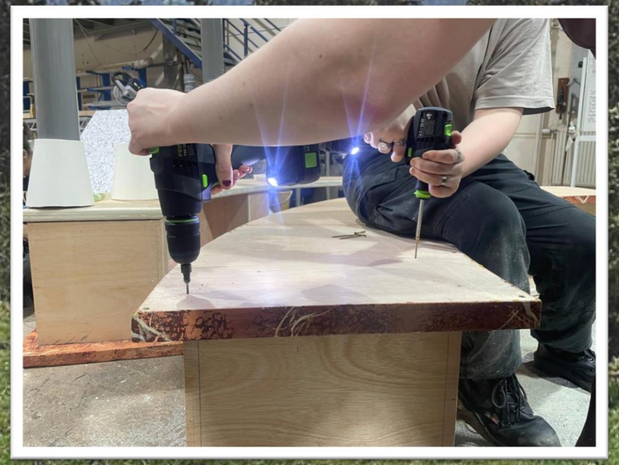
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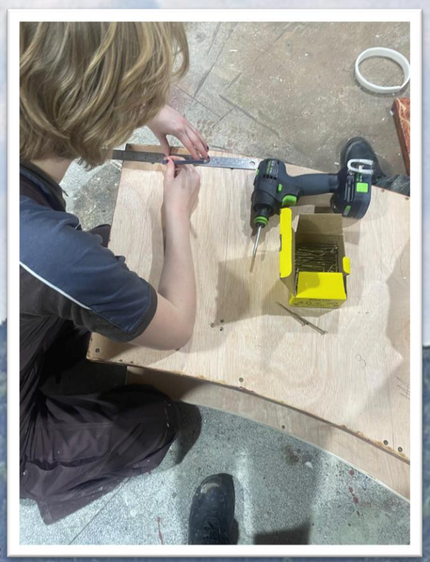


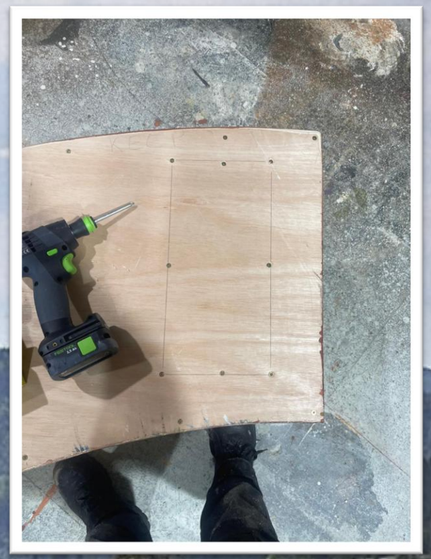




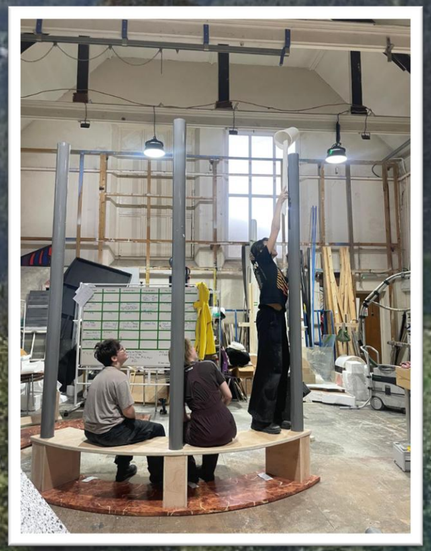










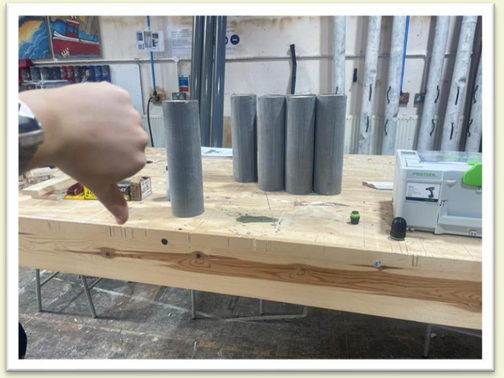


Construction

On Wednesday the 4th, I tried placing the baluster pipes between the base and bench. I had to trim several of the PVC pipes that were to go inside the balusters as some had been cut slightly over 366mm and closer to 368mm. I removed a plywood plate at one end of the pipe, trimmed it down by millimetres on the chop saw, and then re-screwed the plate back in place.

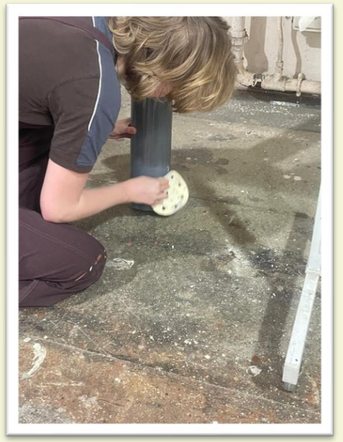
Now with the holes cut into the underside of the ceiling arc by Ant, Cam and I then positioned the poles into the bench and slotted the ceiling pieces over the poles to check the fit. One half of the gazebo roof had an issue at one end, which we resolved by sanding the inside of the ceiling hole to remove some of the excess toggle that was obstructing it.

As we continued working on the gazebo, we found that the poles would occasionally get stuck, either because the supports inside the boxes protruded slightly, or because the primer on the poles made them a little thicker. In retrospect, we could have avoided priming the sections of the poles that slot into the bench legs to reduce unnecessary friction. To ensure the box supports sat correctly, Cam and I used a hammer to tap the supports flush against the box walls, or re-screwed the screws that secured the outer box to the internal supports, so they sat completely flush. We also sanded off the primer at the bottom part of the poles that go into the boxes so there was less friction.









Construction

Next, I fixed the baluster PVC pipes in place that go between the base layer and bench. I marked the midpoint on the 360mm side of each box bench leg at 180mm and drew a centre line between them. The distance between the midpoints of the boxes was three feet. I then marked the centre line on the PVC pipes by measuring 55mm across the top of each pole from different angles and marking where the lines intersected, creating a visible centre point on the side of each pole. I positioned the two poles between each bench leg box approximately one foot in from the box legs midpoint, aligning them roughly along the central line. Although this was not perfectly exact, I adjusted them visually so they appeared evenly spaced from each other and the box bench legs.

I secured them using 40mm screws. It was challenging to determine precise screw placement while working over the bench, and because the plywood ends were square inside the circular poles, some screws initially missed the plywood inserts. Despite this, I successfully installed three screws into each baluster bench leg.

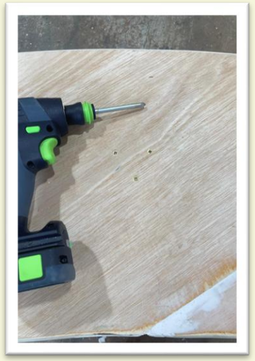
Later, we will need to secure the balusters from underneath to prevent their bases from shifting. However, as we had already begun applying sealant and expanding foam to the cones, this will need to be completed at a later stage when we can remove the poles from their bases and flip the bench to screw into the balusters from below.











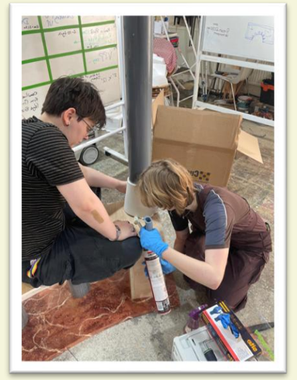
Construction

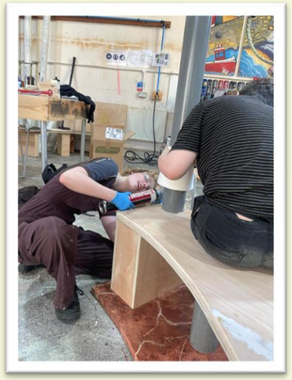
For the Plastazote cones that Alaya put together, we slotted these over the PVC pipes. We realised at this stage that the foam cones were wider than the bench/ ceiling itself and its placement on the poles forced parts of it to overhang over the bench top. To get around this we trimmed them from the larger diameter end, upward by about an inch. Any overhang that was still occurring could be altered by holding the foam flush to the ceiling or bench piece as the expanding foam dries, to fix it in place.

First, we sealed the bottom cones in place with sealant around the top rim to secure it to the pole. The original plan was to seal them, lift the poles to add expanding foam below them then place the poles back down onto the base to place them in the correct position, touching the bench.

We then realised lifting the poles in and out was tricky and tiring work. So instead of lifting the poles, we lifted the cones slightly and applied the Soulant expanding foam from below the cone then slotted this down onto the bench. This did mean that the foam will adhere to the bench, but we could make a cut between the bench and foam in the cone, once the expanding foam had hardened. We carried on this process for each cone on the bench. For the first few attempts, we had used too much foam but didn't realise this until later as it grows over time. We made a note to use less on the next attempts. As well as this we realised we could use the expanding foam as a filler for any gaps between the foam cones and the bench, so we went back around some of the bottom of the cones.









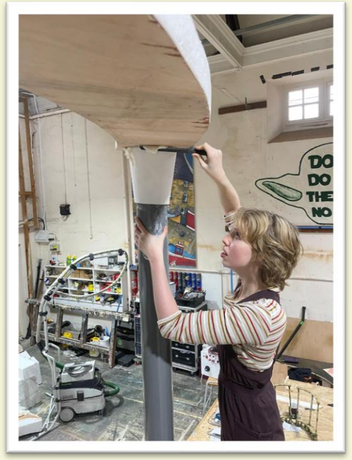


Construction

As Cam and I continued filling the cones with expanding foam, we moved on to the cones that attach to the ceiling, using a similar process. Because expanding foam takes much longer to cure than contact adhesive, sometimes over half an hour, especially given the thickness at the cones' widest diameter, we began using tape to hold the cones securely in position while they dried. We applied gaffer tape to the top cones to prevent them from slipping and to keep the backs flush against the ceiling pieces until the foam had fully set.

By the end of the day, the bottom cones had cured and were ready to be carved. We trimmed away the excess foam with a small saw and filed down any remaining bumps on the bench surface. Fortunately, we are aiming for an uneven, sandy texture to be applied using Flintex, which works in our favour. Small imperfections left by the expanding foam will contribute to a more organic finish, and any visible screw holes or misplaced pilot holes will be concealed beneath the textured coating.

The polystyrene also arrived that day, measuring 384mm in height which was not an issue. Since we are no longer cutting holes into the underside of the bench layer to reduce weight, the balusters need to measure 366mm - the internal distance between the base and the bench. Thankfully, the form Ant and Alaya made from 1mm plywood could be used as a guide around the hole shape to trim off the 18mm excess. The former, shaped like a box with one open end and two sides featuring a matching curved profile, allowed us to run a hot wire along its edges to carve the baluster shape. By flipping the polystyrene cuboid and carving along each long edge in turn, we were able to achieve the desired form.







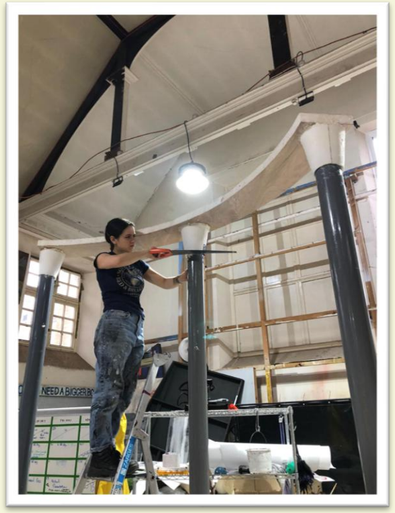


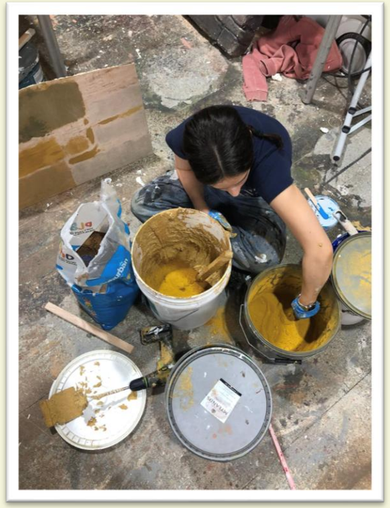
Scenic Art

On Thursday the 5th, Cam and I came in early to carve the now dried expanding foam around the top cones and seal these to the poles at the bottom. The top of the cone was carved from the ceiling layer so the ceiling can be removed for transport. After carving and sealing the last of the Plastazote cones, Cam and I took down the ceilings for texturing.

With our sample board from the beginning of the construction process and reference images, we mixed together Flintex with Mylands Raw Umber and Yellow Ochre pigmented powders, white emulsion and Bristol turquoise blue (to tone down the vivid yellow appearance). This was combined with soft sand, and we used water to thin it a little to make it easier to combine. We applied this to the ceiling arc tops and sides, then moved onto the Gazebo poles, bench and box bench legs. As cam and I textured the Gazebo, Ant and Alaya made a form for the Balusters to carve out the interior 110mm pipe size that they need to sit around.

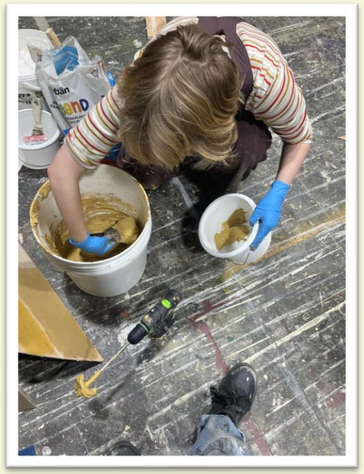
We called this process ‘Easter Egging’ – originally, we had planned to carve out the cylinder for the PVC pipe in the polystyrene, then slot the baluster carving over the small baluster pipes before assembling the bench and rest of the Gazebo around it. To move things along in our process, we had decided to put the Gazebo together with the PVC pipes screwed in place without their polystyrene outer layer, so we could move onto cone glueing and texturing the surface of the Gazebo. This is because the polystyrene took a little longer to arrive than we anticipated, despite this we were still able to apply the polystyrene later in the process, just by using a different approach.

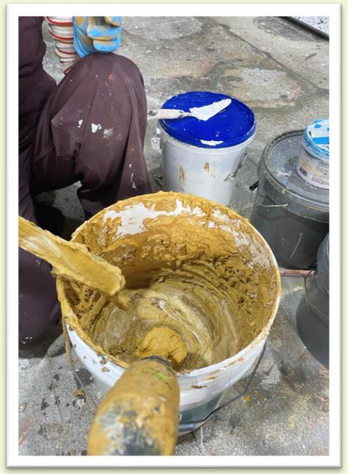


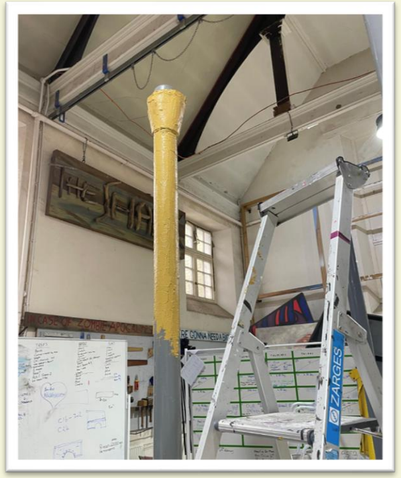




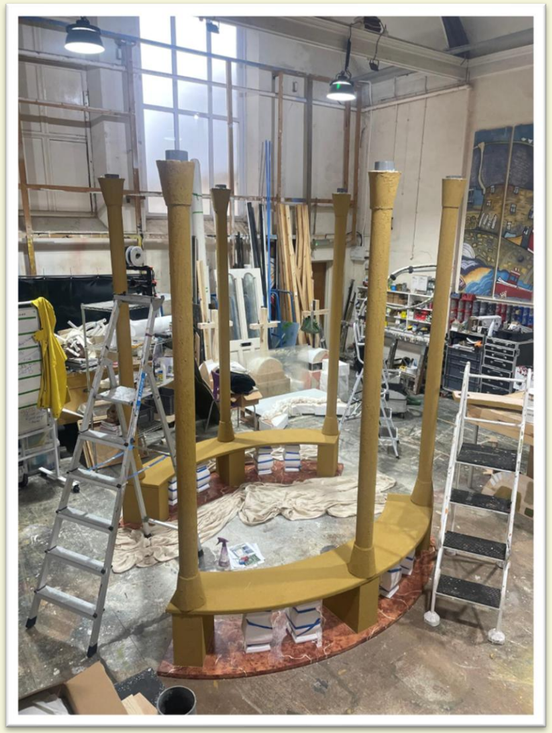
Scenic Art











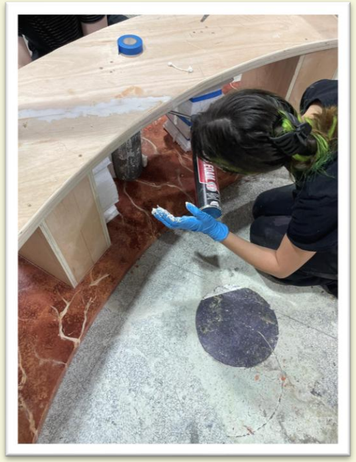






Scenic Art

Now, Alaya and Ant were going to carve the polystyrene baluster shape, then cut it in half longways to stick it together with expanding foam around the pole – just like when you make a solid easter egg from two halves! They carved the 110mm diameter out of the balusters, applied water then expanding foam to the carved polystyrene then after putting them around the pole, held them In place for the curing process with electrical tape wrapped around it.

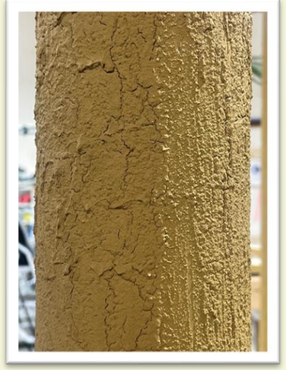






Before they got onto this, they paused to help the Bridge team get their Jesmonite on as with just 3 people it was a very time consuming process, and they still needed to add a second coat after this first one. After completing the texturing on the poles with cam, I went to help the bridge group too with the idea that by the time we leave, the bridge will have its first coat of Jesmonite complete and us our texturing completed on the Gazebo (bar the ceiling pieces that needed flipping once dried)





Once the flintex, sand and Mylands mix began to dry, we found the result was a lot more vibrant than we intended. When swatching the texture during the mixing process, we didn't consider how the pigment may change in the drying process. The shade in the pot looked far more dull than the pigment turned out on the gazebo once fully dried. Instead of change the shade now that most of the Gazebo was textured, we thought about how we could add some blue to a wash to correct the overly yellow texture. We will also be able to adjust the shade of the texture in the dirtying down process, through dry brushing to takeaway some of the vividness.

Scenic Art

On Friday the 6th February, we arrived to find that the textured surfaces had fully dried and was looking great. Some areas had cracked, but this actually complemented our weathered design and added to the overall effect. We began texturing the underside of the ceiling while Ant trimmed the expanding foam on the balusters to neaten their shape.

We then mixed a paint wash to tone down the pigmented Idenden. The wash was made using Mylands Yellow Ochre and Raw Sienna, Bristol Turquoise, the remainder of Rosco Supersaturated White combined with white emulsion (as we had run out), Bristol Burnt Umber, and Bristol Chrome Yellow. Earlier that morning, we had also mixed more sand textured Idenden for scrimming the polystyrene with muslin, dulling the colour with black and burnt Umber to better achieve the shade we were aiming for. After lunch, we all applied the wash using laying in brushes, covering the poles, cones, bench, and box bench legs to unify the tones across the structure. Once the scrim on the balusters had dried, we painted them with the same wash to ensure consistency in colour and finish throughout.



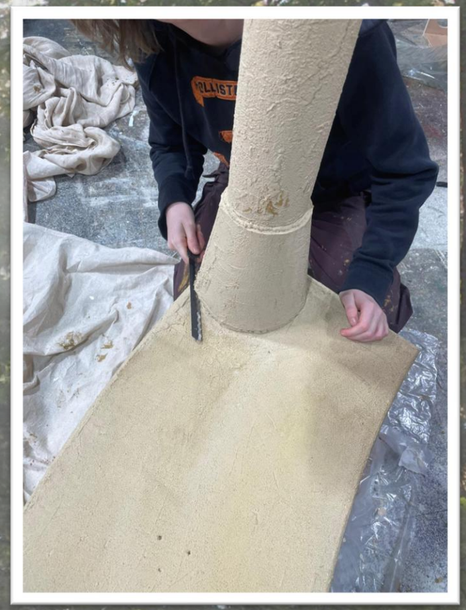




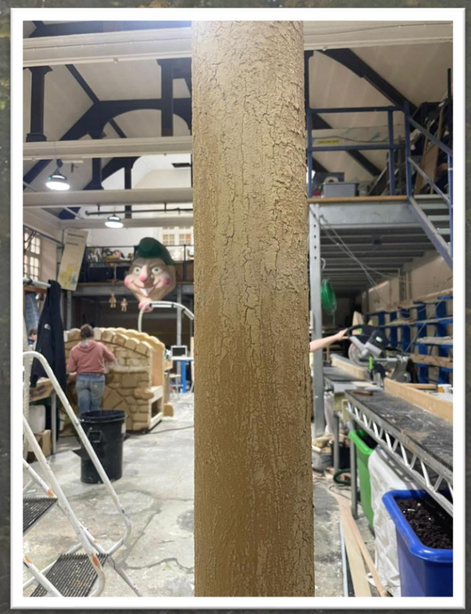
Scenic Art

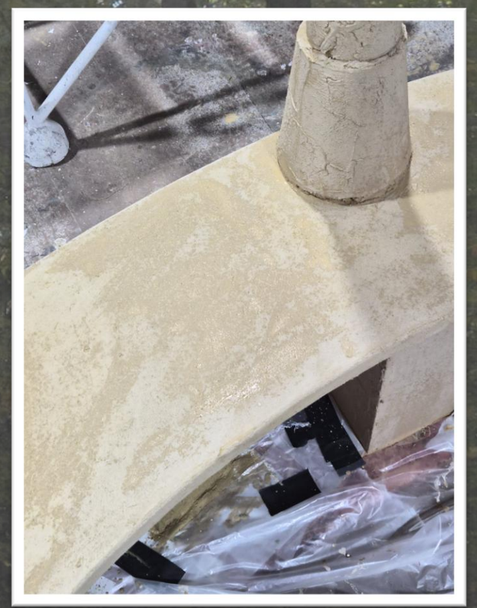
On Saturday the 7th, after the toned down paint wash had dried overnight, we carefully re-cut the cones away from the bench using a saw. The dried paint had sealed the join between the poles and the bench, but these elements needed to remain separable for transporting the gazebo to the Lyric Theatre. By making a controlled incision, we aimed to keep the cut as subtle as possible and prevent the paint from cracking unpredictably when the poles were removed.

On inspection, we were very pleased with how the wash had dried. The colour had softened into a lighter, more natural tone that complemented the pale pinks and sandy hues of the marble base. The Idenden had also dried and cracked, which, although unintentional, worked perfectly with our weathered aesthetic. The cracking can occur for several reasons: the workshop may have been too warm or dry overnight, the mixture could have been applied too thickly (often referred to as mud cracking) or the coating may have been laid on too heavily in a single layer, causing the surface to dry faster than the material beneath and resulting in tension cracks. In our case, the effect convincingly resembled aged, weathered stone.





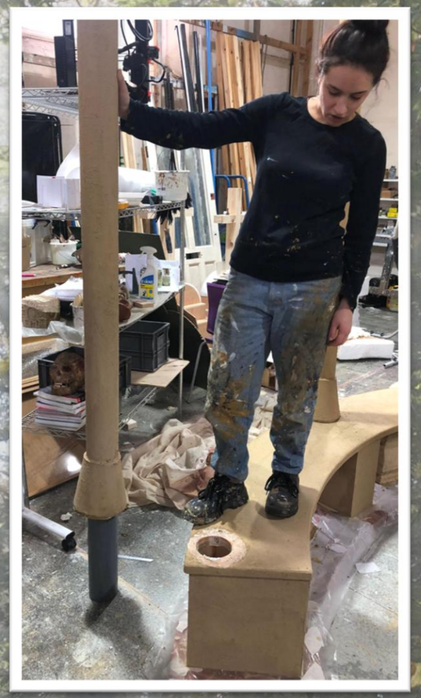




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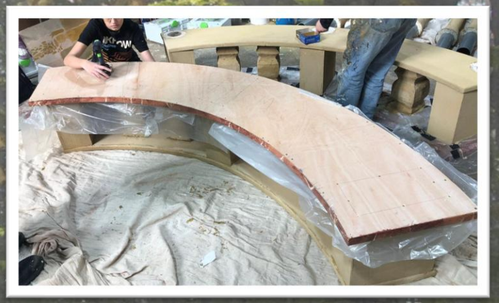
To ensure the structure could still be dismantled, we removed the roof and lifted the poles out from the bench, laying them on the floor. We labelled each pole with a symbol and marked the corresponding symbol inside the relevant box bench leg and ceiling hole so everything could be reassembled accurately. With the ceiling and poles removed, we then flipped the bench and its base over to insert screws into the underside to secure the balusters. This required all of us working carefully and communicating clearly to do it safely, placing a dust sheet on the floor to protect the bench from damage.

Earlier, I had fixed the balusters in place from the top while the gazebo was assembled, so this was our first opportunity to secure them properly from beneath. While the bench was flipped, we also added extra screws to the box bench legs between the existing corner screws to provide additional support.
As not everyone was needed for the screwing, I used this time to touch up areas of the beige wash that had been missed or needed a second coat.



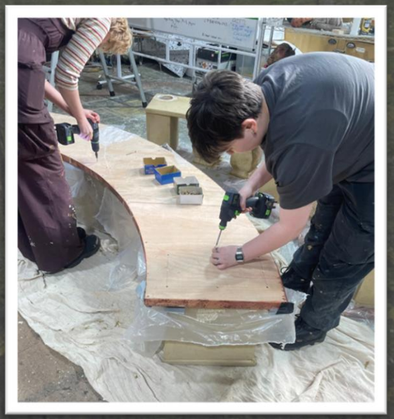








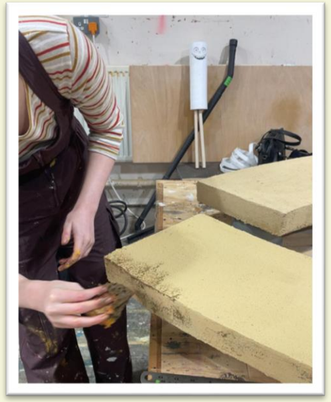




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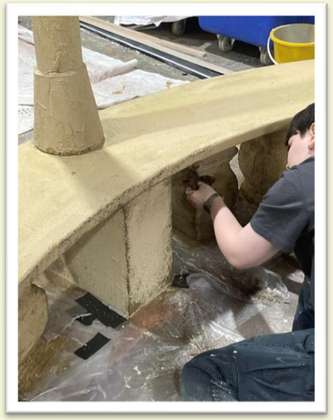
Once we flipped the bench back upright, I painted the circular areas around the pole holes with neat ‘Gazebo shade.’ This was a precaution in case the poles rotated slightly in their bases and exposed plain wood areas that should be concealed by the cones. Covering the visible wood and white foam made a noticeable improvement. I used a less diluted version of the paint so that one coat would provide solid coverage before we reassembled the poles and began the process of dirtying down. At this point, the heating had stopped working in the workshop, and rather than lose time waiting for the paint around the pole holes to dry, I used a heat gun to speed up the process.





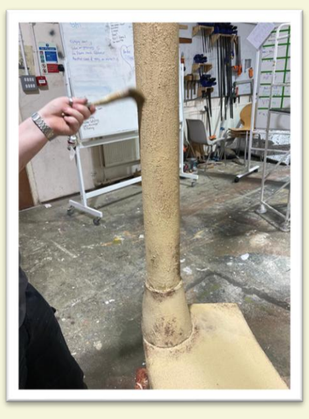
The last thing we did on the Saturday was add the green sponging and dry brushing effect, as seen on Cam’s model. This was to create an algae effect that occurs toward the bottom of the gazebo where it meets the floor.









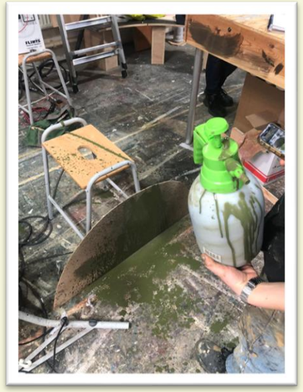


Scenic Art

On Monday the 9th, the grey-green sponging and brown dry brushing we had completed on Saturday had fully dried, allowing us to properly assess whether anything further was needed. We found that the overall effect had dried much paler than expected, so we decided to introduce a more vivid green. On Cam's model, the green had also dried very light, almost brown, so we wanted to deepen the tone to achieve a richer, more noticeable finish. Although the effects we created over the weekend looked realistic and effective up close, we realised that the scenic detailing needed to read clearly from a distance and under stage lighting. With this in mind, we chose to intensify the weathering and dirtying down.

We mixed a darker, more vivid green using Bristol Brunswick Green, Turquoise, Burnt Umber, and Chrome Yellow. Before applying it, we tested several spray bottles, both pressurised and manual trigger types. We found the pressurised bottles difficult to control, as their output varied and sometimes released more paint than intended, resulting in concentrated splodges. The smaller trigger spray bottles proved easier to manage, and we practised on a sample board first. To minimise mess and improve the spray effect, we laid sheets on the floor and aimed the nozzle downward; this created a fine mist that settled onto the gazebo surface, avoiding larger droplets that would dry as directional splatters rather than subtle, rounded marks.





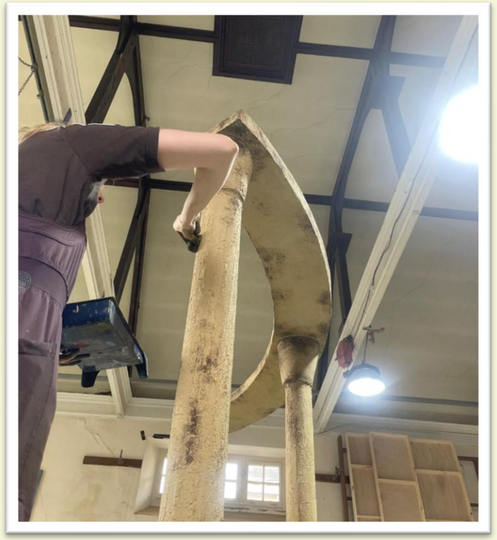


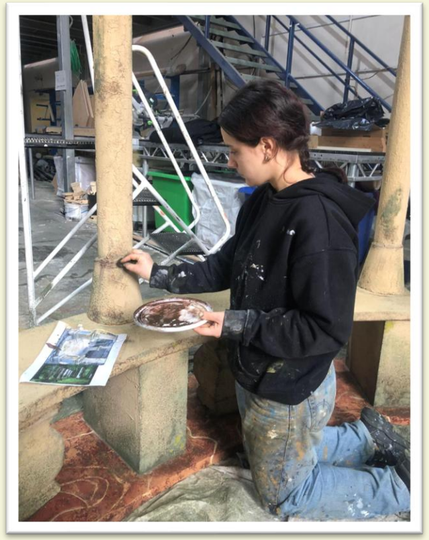
Scenic Art

In addition to spraying, we sponged the darker green onto the ceiling. We felt that spraying overhead would be too uncontrolled and might coat the poles unintentionally, whereas we mainly wanted this darker shade to sit along the bench edges, around the cones, and within cracks in small, natural-looking amounts. For this, we used synthetic sponges, which have smaller pores and allow for a subtler application. By cutting the sponge into small pieces and holding them in a claw grip, obscuring their edges with your fingers, we avoided leaving obvious sponge prints.
After this layer, we mixed a lighter green variation using white and Bristol's Brunswick Green. As we were running low on Chrome Yellow, we added water directly into the Bristol pot to make full use of what remained, and supplemented the mix with Wickes Mustard Yellow emulsion. We also incorporated some of the brown shade previously created for dirtying down, giving the green a more rich colour.





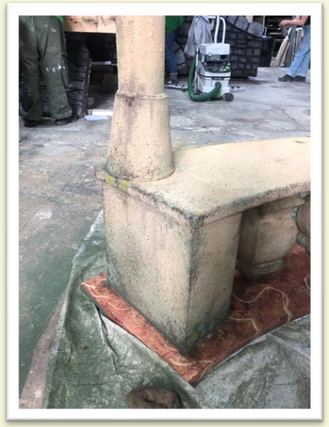




Scenic Art

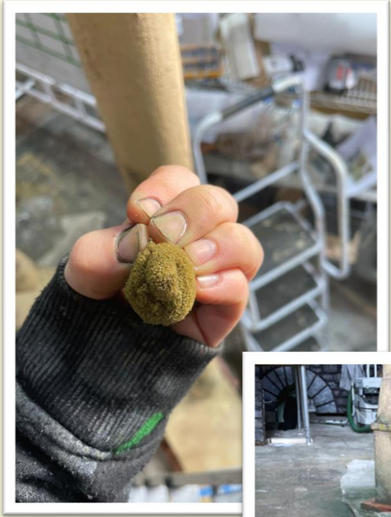
I applied the lighter green shade using only a synthetic sponge, as this layer was intended to act as subtle highlights and needed to be controlled and sparingly placed. At the same time, Alaya and Ant created a water-damage effect with a light grey tone, applying it to the tops of the cones and dragging it down the pipes, gradually thinning the paint as it descended to create a natural, streaked appearance. Once this had dried, and after stepping back to properly assess the overall impact of the weathering, I decided to redefine the edges of the gazebo and deepen the water marks with a dark brown to add greater contrast and definition.

We also used the last of the watered-down Chrome Yellow, applying it with a synthetic sponge and a sash brush, although a round stencil brush would have been ideal. This was dabbed on in soft, circular motions, placed sparsely and irregularly where the dark green sponging had been added, creating a subtle yellow lichen effect. After lunch, we repositioned the gazebo to face the mezzanine so we could view it from a distance and place it as it would appear on stage. This allowed us to get a better feel for it and what else may need doing to it.




Scenic Art



Sponging on round, yellow Lichen effect

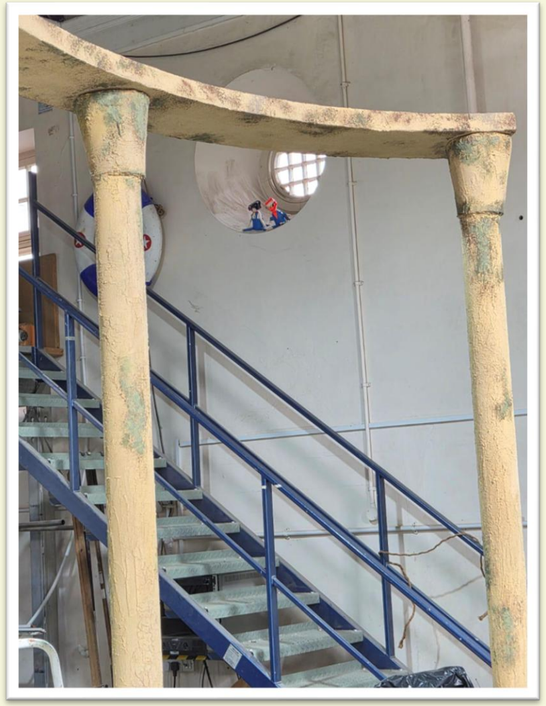






Alaya adding damp weather damage in grey to the underside of joins and cracks





Here you can see the light green highlights placed over the dark green and brown markings to add some more depth and make it stand out.

Scenic Art



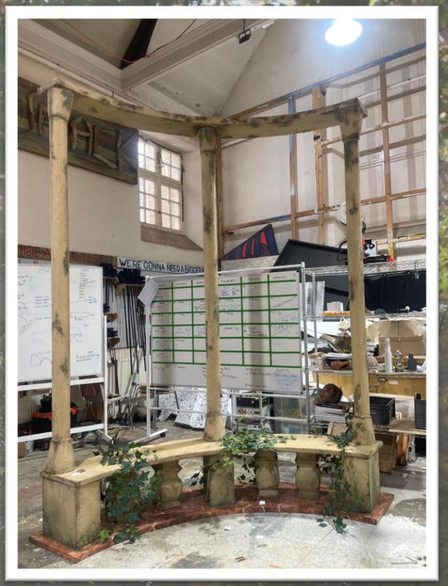


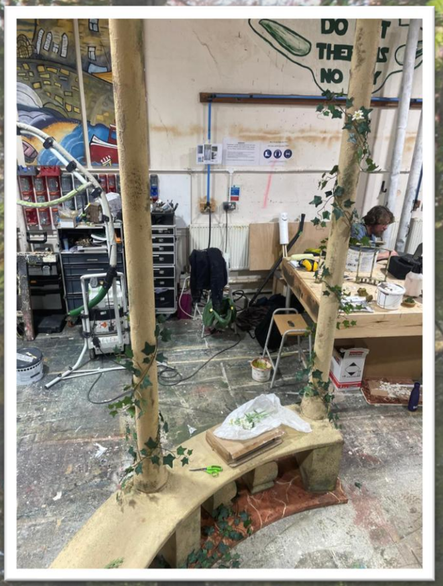
Our view of the Gazebo from the Mezzanine to assess where may need more work or if we were happy with the results.

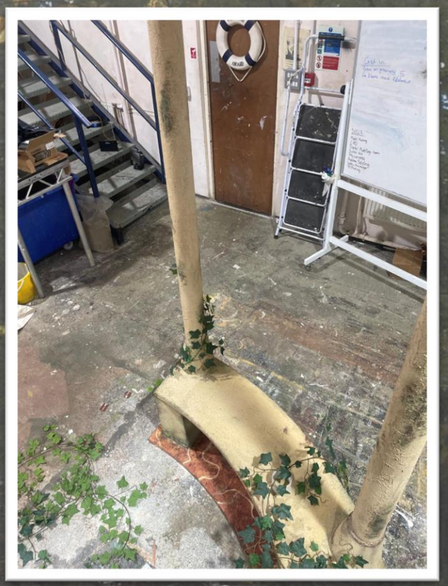
Scenic Art

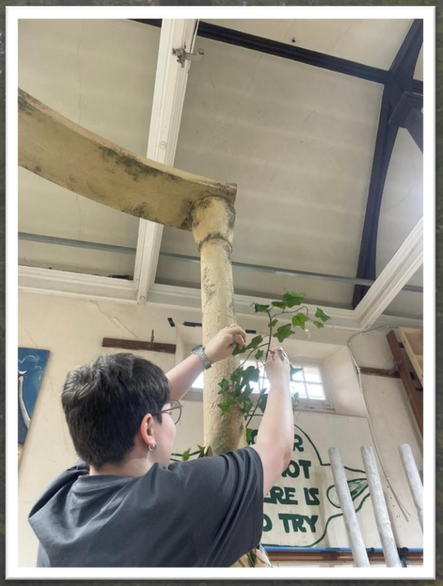
For presentation purposes, and to test how we might dress it for the final installation at the Lyric, we added the artificial ivy. The ivy came in one-metre coils, which we wrapped and draped organically around the poles, bench, and balusters. We avoided decorating every pole and made sure not to wrap it in a uniform or repetitive pattern, allowing it to look more natural and less staged. We also trimmed the Edelweiss bouquets so that only the flower heads and a short length of wired stem remained, making them easier to attach discreetly to the ivy. We placed the 12 flowers sporadically so they appeared to grow from the greenery, an artistic choice rather than a realistic one, but one that enhanced the romantic aesthetic. The additional greenery helped define the structure, and the delicate white flowers tied the whole piece together beautifully.

We secured the ivy using fishing wire, wrapping it around the poles and tying it firmly in place. Fishing wire worked particularly well as it is thin and nearly invisible, yet strong enough to hold everything securely. For the final installation at the Lyric, we decided we would reinforce the ivy placement using a wood staple gun alongside the fishing wire. After adding the greenery, which unified the overall look, we felt the scenic art was complete. We were careful not to overwork it; making the gazebo too dirty or aged risked it appearing dingy rather than romantic, and we wanted it to remain in keeping with the grandeur of the villa setting. Finally, we applied a second coat to the birch trees. We adjusted Dave's existing mix of white, yellow, and green by adding a small amount of Bristol Silver to create an off-white tone with a subtle magenta hue. This was painted on in perpendicular strokes across the trunk to enhance and support the natural pattern of the bark striations.





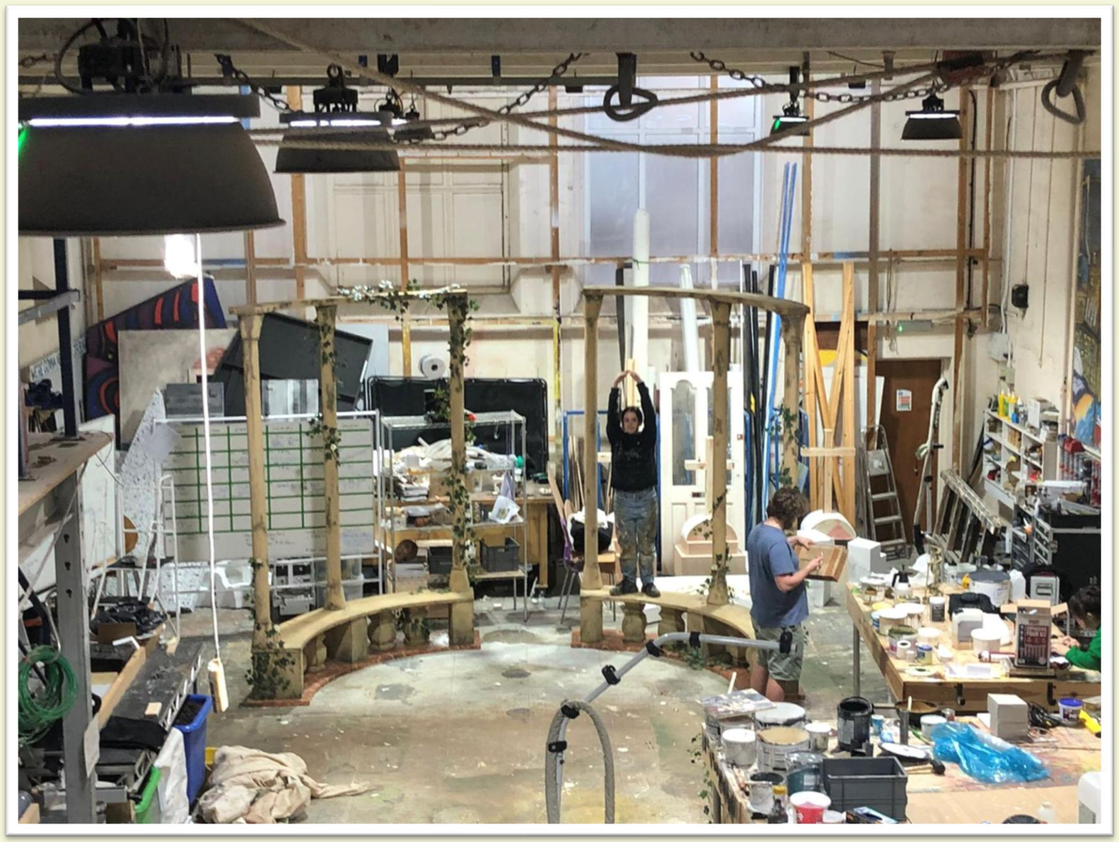




Scenic Art

The Gazebo dressed and prepared for the presentation





The Presentation

Due to our funny few weeks working on this project around the snow days, damp, and lack of heating in the Workshop slowing our process, we decided to change the format of our presentations into a Q&A with questions supplied by Dave and the audience. There will be an informal slideshow or print outs that support our process. We were given the questions on Monday 9th to prepare our answers for the presentation on the following day. There is a question for every person in the group, but we will answer them across the group. My approach to this was putting notes down for each question here, then when we have a group discussion on Tuesday morning, we can decide who takes the lead on which questions, which will most likely be the questions that most apply with our key input throughout the project. For example, CAD, model making, polystyrene form designing, scenic art etc. Below are my initial notes for each question, I then refined these before our group meeting on Tuesday in my notebook, ready to be used in the presentation as cue cards.

The questions for our group were as followed:

- **What were the key conceptual ideas or performance requirements that influenced your design choices for the stone bridge and sandstone gazebo?**

- People will be dancing on them – need to be structurally strong to support the weight of the performers and their dynamic movement
- Needs to fit in small space – our design isn't too deep and is in two parts
- Needs to be quickly moved on and off stage and in blackout

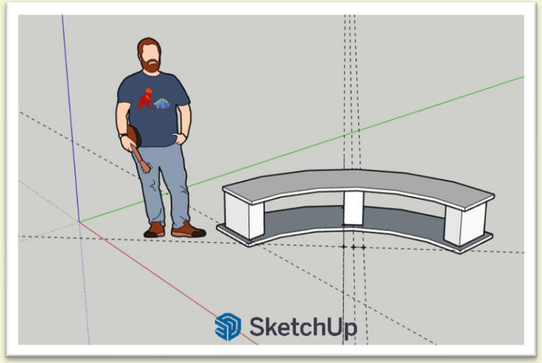
- **What factors influenced your decisions about scale, proportion, and structural layout, and how effectively do you think these choices support the intended performance context?**

- Looked at the actual size of Gazebos
- Looked at the actual size of seats and benches
- Looked at the length and height of the stage at the Lyric for a proportionate size – was worried it will be too tall, there is some realisation and the penny drops during construction when you look at your model, then look at your build and go oh yeah, its 10 times that (pointing at model)
- The idea of box bench legs and balusters with PVC piping and discs in side add to the surface area of these components

The Presentation

- **Identify any technical or structural challenges you encountered during construction. How did you adapt your process or problem-solve to maintain design integrity? GAZEBO**

- We made a prototype and from this decided the size of our bench legs, also decided to place the bench box legs flush to the edge of the bench top so it couldn't be unbalanced and tipped
- Making the arcs – used a home-made compass
- The cones and their templates, to cut from the Plastazote
- Technical issues include – Fusion playing up. I did start the build in SketchUp which I have used before for other projects. I asked myself what I would have done if I was asked to complete a 3D render for a real job but was having technical difficulties, and I would have made it in SketchUp instead to show my client my design. I didn't get to adding the poles and ceiling however because I was short for downtime to work on this. Also SketchUp isn't quite as sophisticated as Fusion and I was learning new processes that were different to Fusion.

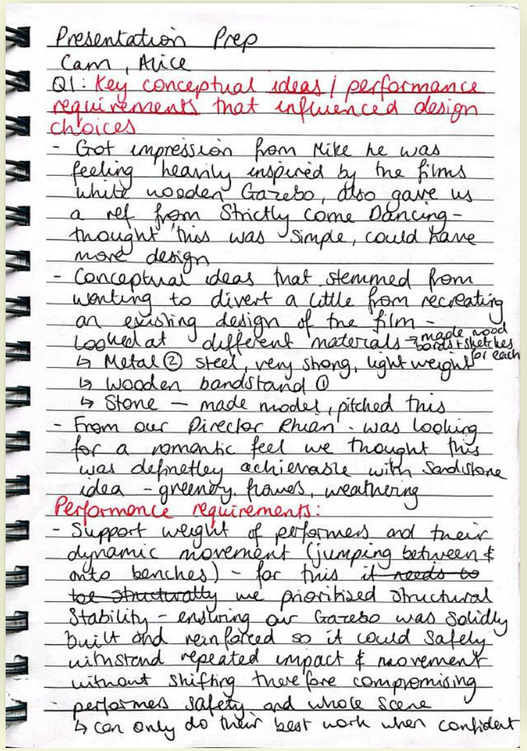


- **Reflecting on the completed pieces, what aspects of your design, construction, or painting would you refine further, and why? Consider both creative and practical improvements. GAZEBO**

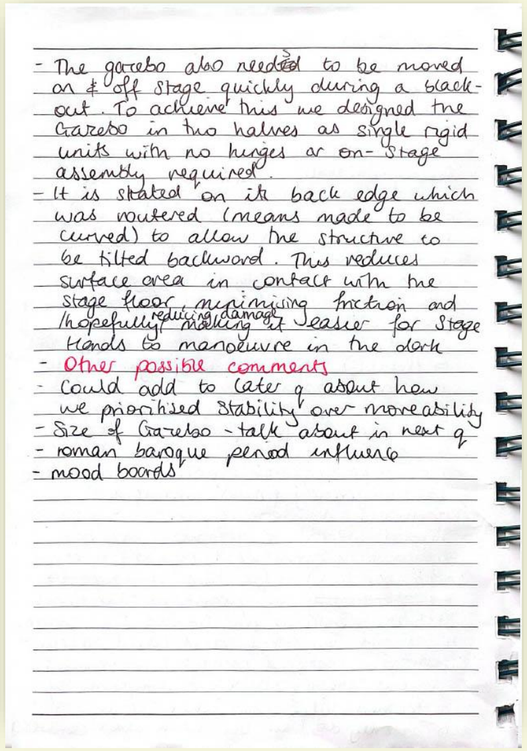
- Design – the toggle placement in the ceiling arc so they don't obstruct the columns.
- Construction – made it lighter, cutting holes in the underside of the bench top – found it a bit confusing to work out because we were *Frankensteining* parts of our layers together, they didn't fit on a single sheet of ply
- Painting – made primer/ sand texture layer closer in colour to our final result – for if the top layers chip the colour is consistent. Also, would have saved us some time from doing a wash although I still feel like we would have needed to add more layers of paint, it would have been nice for these top layers to be the same shade rather than working as a colour corrector over the really yellow shade of the base layer
- Added engraving details to the side of bench legs as shown by Alaya in the refined model making phase
- Made it lighter – we prioritised structural stability over moveability.

The Presentation

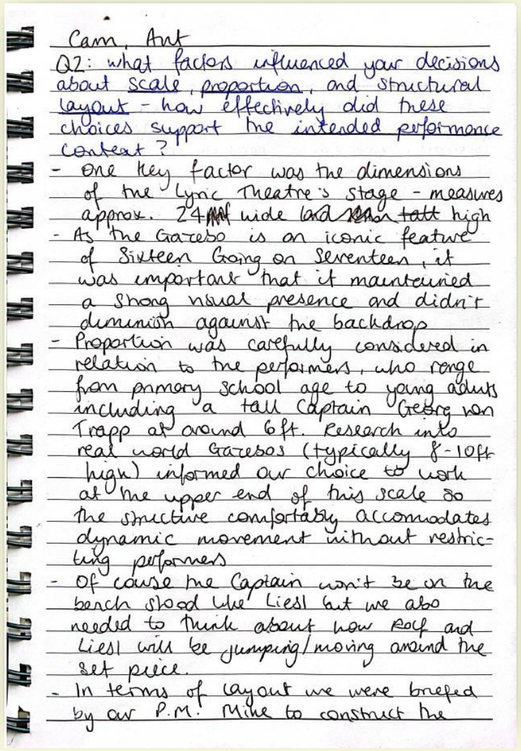
My refined answers written up in my notebook to use as prompts during the presentation, in case I need a reminder:



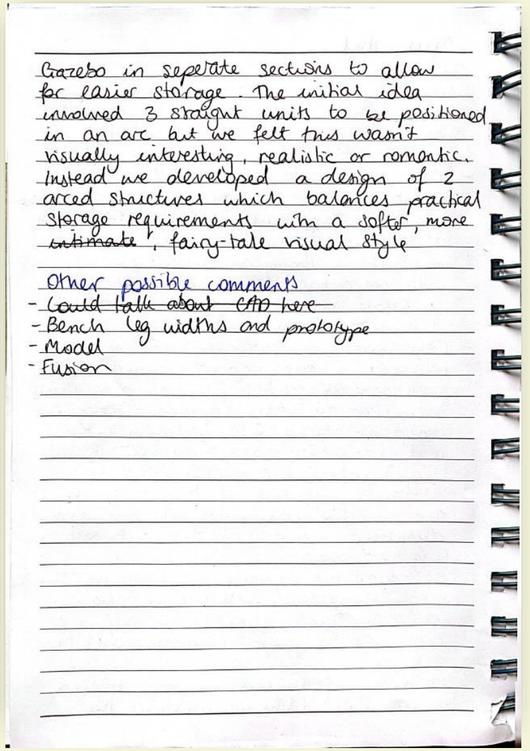
Presentation Prep
Cam, Mike
Q1: Key conceptual ideas / performance requirements that influenced design choices
- Got impression from Mike he was feeling heavily inspired by the films white wooden Gazebo, also gave us a ref from Strictly Come Dancing - thought this was simple, could have more design
- Conceptual ideas that stemmed from wanting to divert a little from recreating an existing design of the film - looked at different materials → made mood boards + sketches for each
↳ Metal ② steel, very strong, light weight
↳ Wooden bandstand ①
↳ Stone — made model, pitched this
- From our Director Rhian - was looking for a romantic feel we thought this was defnetley achievable with Sandstone idea - greenery, flowers, weathering
Performance Requirements:
- Support weight of performers and their dynamic movement (jumping between & onto benches) - for this ~~it needs to be structurally~~ we prioritised structural stability - ensuring our Gazebo was solidly built and reinforced so it could safely withstand repeated impact & movement without shifting therefore compromising performers safety and whole scene
↳ can only do their best work when confident



- The gazebo also needed to be moved on & off stage quickly during a black-out. To achieve this we designed the Gazebo in two halves as single rigid units with no hinges or on-stage assembly required.
- It is stated on its back edge which was routered (means made to be curved) to allow the structure to be tilted backward. This reduces surface area in contact with the stage floor, minimising friction and (hopefully) reducing damage making it easier for stage Hands to manoeuvre in the dark
- Other possible comments
- Could add to later q about how we prioritised Stability over moveability
- Size of Gazebo - talk about in next q
- roman baroque period influence
- mood boards



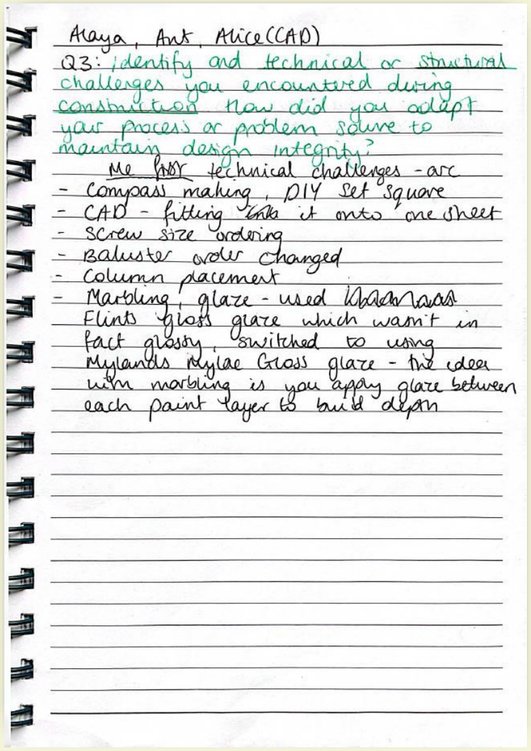
Cam, Ant
Q2: what factors influenced your decisions about scale, proportion, and structural layout - how effectively did these choices support the intended performance context?
- One key factor was the dimensions of the Lyric Theatre's stage - measures approx. 24ft wide and ~~20ft~~ tall high
- As the Gazebo is an iconic feature of Sixteen Going on Seventeen, it was important that it maintained a strong visual presence and didn't diminish against the backdrop
- Proportion was carefully considered in relation to the performers, who range from primary school age to young adults including a tall Captain Georg von Trapp at around 6ft. Research into real world Gazebos (typically 8-10ft high) informed our choice to work at the upper end of this scale so the structure comfortably accommodates dynamic movement without restricting performers
- Of course the Captain won't be on the bench stood like Liesl but we also needed to think about how Rolf and Liesl will be jumping/moving around the set piece.
- In terms of layout we were briefed by our P.M. Mike to construct the



Gazebo in seperate sections to allow for easier storage. The initial idea involved 3 straight units to be positioned in an arc but we felt this wasn't visually interesting, realistic or romantic. Instead we developed a design of 2 arced structures which balances practical storage requirements with a softer, more ~~intimate~~, fairy-tale visual style

Other possible comments
- ~~Could talk about CAD here~~
- Bench leg widths and prototype
- Model
- Fusion

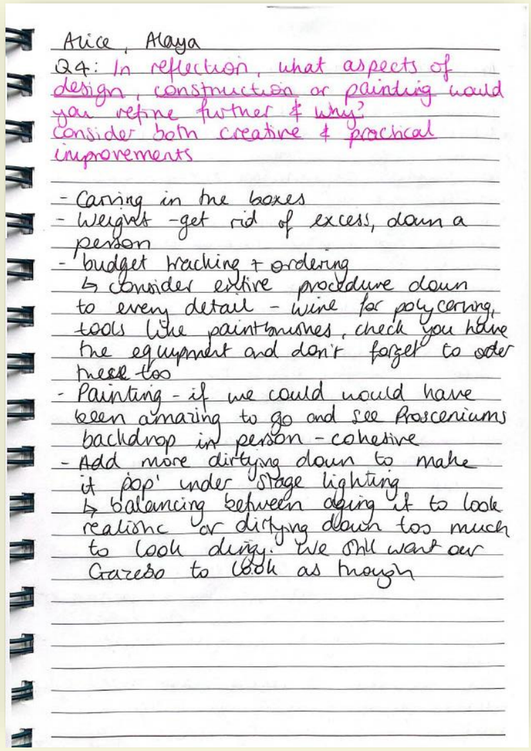
The Presentation



Alaya, Ant, Alice (CAD)

Q3: identify and technical or structural challenges you encountered during construction. How did you adapt your process or problem solve to maintain design integrity?

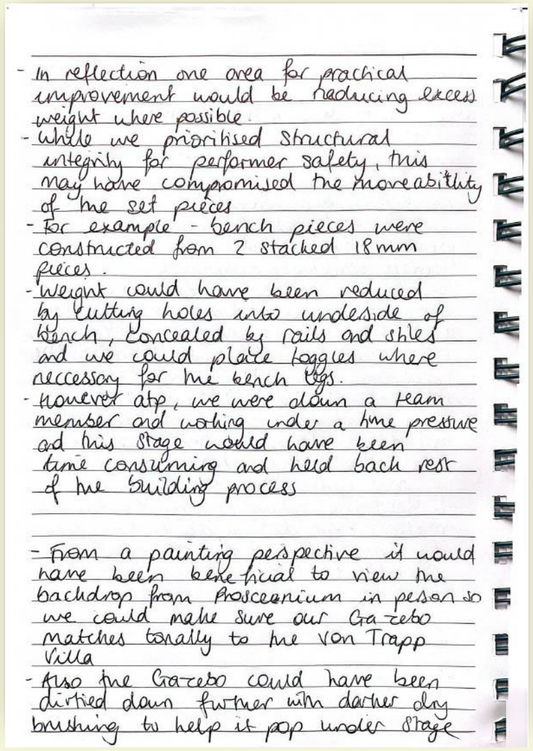
Me for technical challenges - are
- Compass making, DIY set square
- CAD - fitting it onto one sheet
- Screw size ordering
- Baluster order changed
- Column placement
- Marbling, glaze - used Rhodamas Flints gloss glaze which wasn't in fact glossy, switched to using Mylands Mylac Gross glaze - the idea with marbling is you apply glaze between each paint layer to build depth



Alice, Alaya

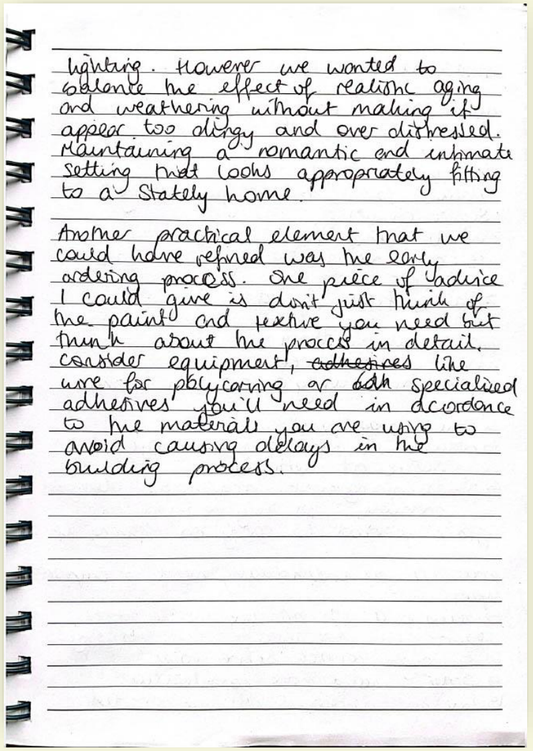
Q4: In reflection, what aspects of design, construction or painting would you refine further & why? Consider both creative & practical improvements

- Caving in the boxes
- Weight - get rid of excess, down a person
- budget tracking + ordering
  - consider entire procedure down to every detail - wire for polycarving, tools like paintbrushes, check you have the equipment and don't forget to order these too
- Painting - if we could would have been amazing to go and see Proscenium's backdrop in person - cohesive
- Add more dirtying down to make it 'pop' under stage lighting
  - balancing between doing it to look realistic or dirtying down too much to look dirty. We still want our Gazebo to look as though



- In reflection one area for practical improvement would be reducing excess weight where possible.
- While we prioritised structural integrity for performer safety, this may have compromised the moveability of the set pieces
- for example - bench pieces were constructed from 2 stacked 18mm pieces.
- Weight could have been reduced by cutting holes into underside of bench, concealed by rails and stiles and we could place toggles where necessary for the bench legs.
- However atp, we were down a team member and working under a time pressure and this stage would have been time consuming and held back rest of the building process

- From a painting perspective it would have been beneficial to view the backdrop from Proscenium in person so we could make sure our Gazebo matches tonally to the Von Trapp Villa
- Also the Gazebo could have been dirtied down further with darker dry brushing to help it pop under stage



lighting. However we wanted to obtain the effect of realistic aging and weathering without making it appear too dirty and over distressed. Maintaining a romantic and intimate setting that looks appropriately fitting to a Stately home.

Another practical element that we could have refined was the early ordering process. One piece of advice I could give is don't just think of the paint and texture you need but think about the process in detail. Consider equipment, ~~adhesives~~ like wire for polycarving or ~~add~~ specialised adhesives you'll need in accordance to the materials you are using to avoid causing delays in the building process.

The following pages are our slides for the presentation that we prepared as visual references on Tuesday morning before the presentation at 3.30 that afternoon. We did our presentation prep in between coats of paint on the birch trees to ensure these would be dry for our set delivery on the Wednesday.

Gazebo Group

Ant, Alaya, Cam and Alice



HIDDEN:

Things we want to show in presentation

- Initial design ideas – Alayas sketch, mood boards that show us considering wood, metal or stone
- Prototype
- Refined model
- Cone template
- Polystyrene form
- Mood boards (Initial inspo, scenic art references)
- CAD screenshots
- Fusion Screenshots
- Process pictures



HIDDEN:

Cam, Alice

1. What were the key conceptual ideas or performance requirements that influenced your design choices for the stone bridge and sandstone gazebo? **GAZEBO**

- **Mood boards**
- **References to Baroque period**
- **Proscenium set pieces**

Mike Rogers, our Production Managers references:











Wood Gazebo Mood Board

















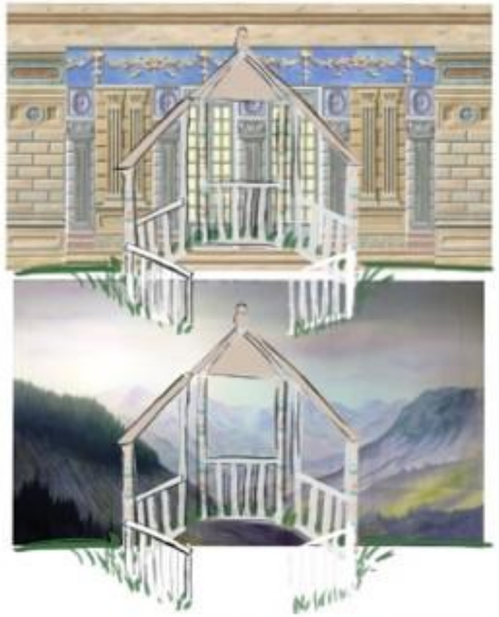


Wood Gazebo Sketches:



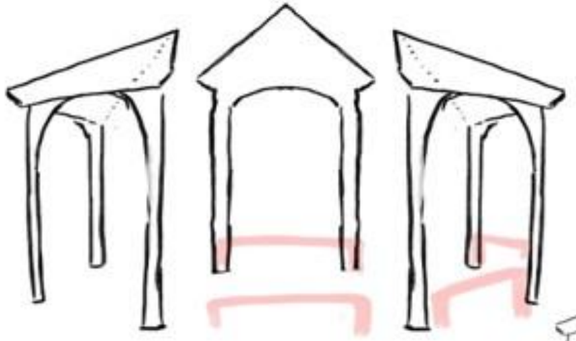




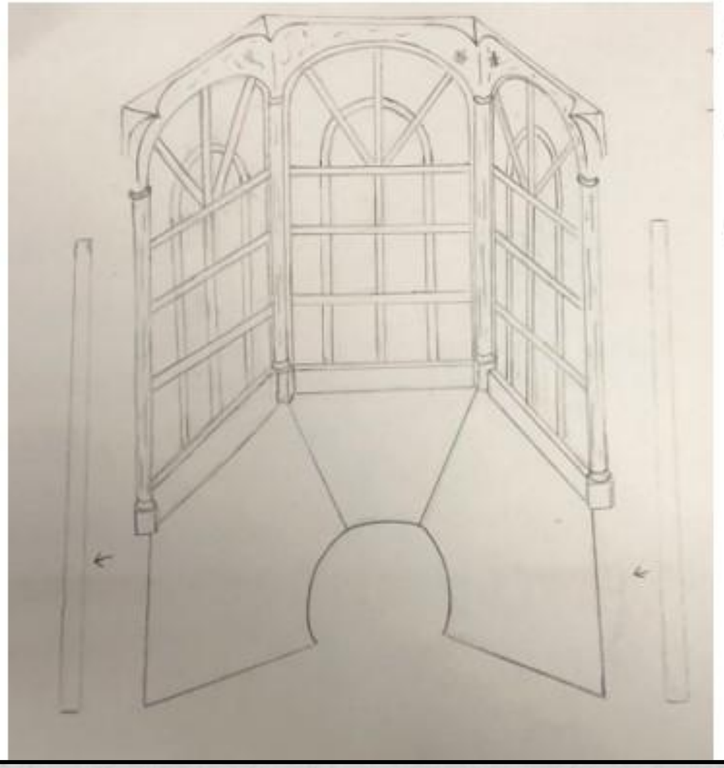


- Fencing around the base
- Implication of a roof
- Three sections









- Panelling similar to the Gazebo in the movie
- Connected to a base on the floor
- Columns to match exterior of house



- Two sides have a roof the centre goes up to suggest the roof continues round
- Arch shaped cut outs to keep it open



Metal Gazebo Mood Board











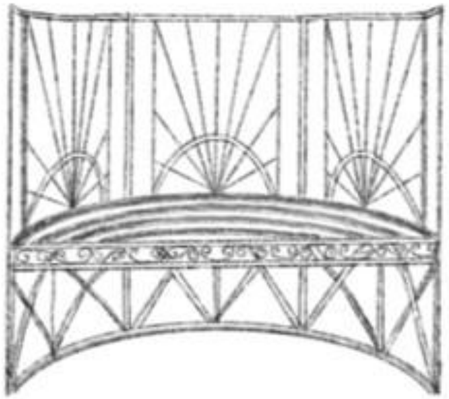




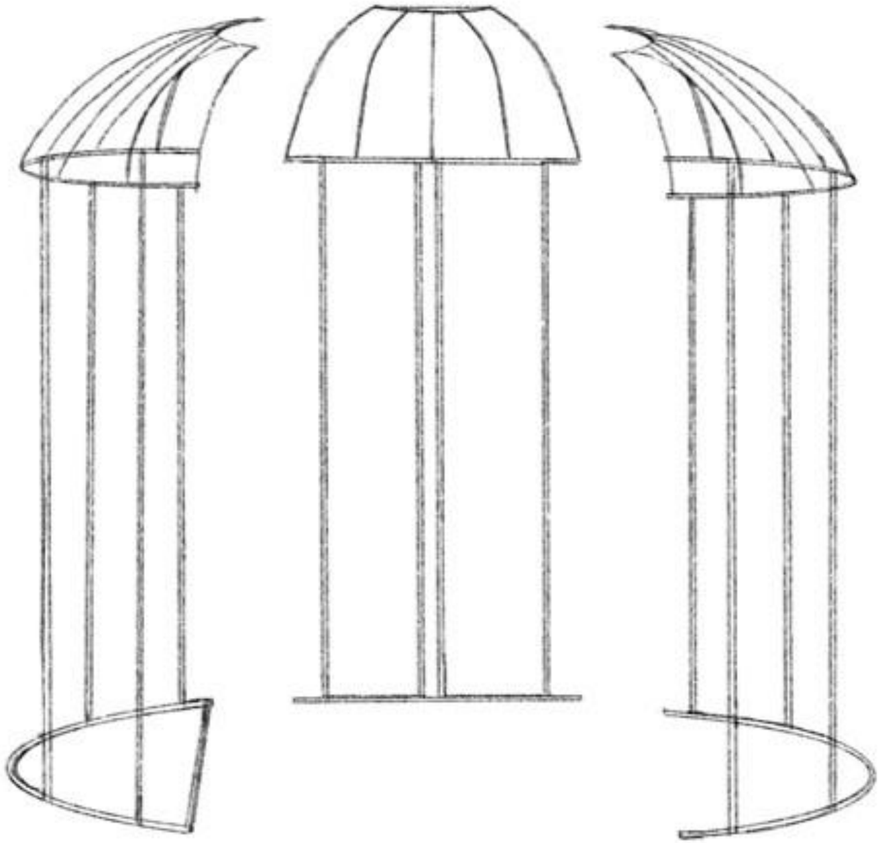



Metal Gazebo Sketches:

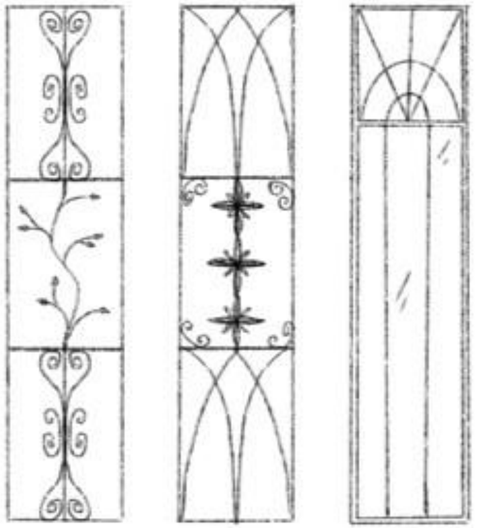


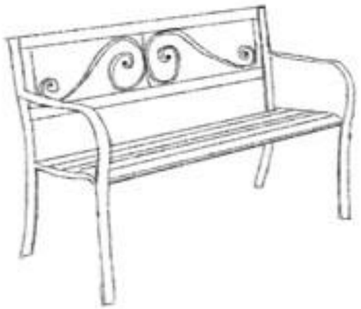


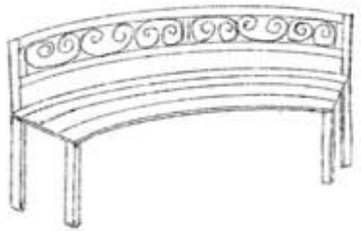
Split into three pieces, two of which are self-supporting semi-circle shapes and the back structure supported by braces



Panel design ideas, could be all metal detailing or could include glass panes









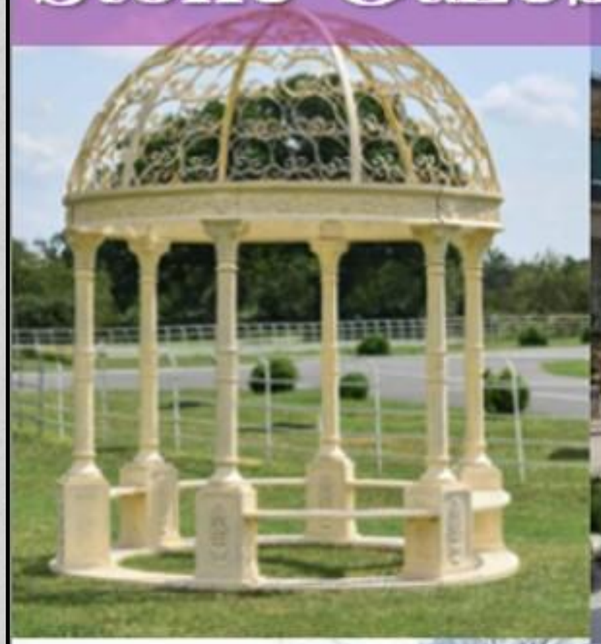
Bench options

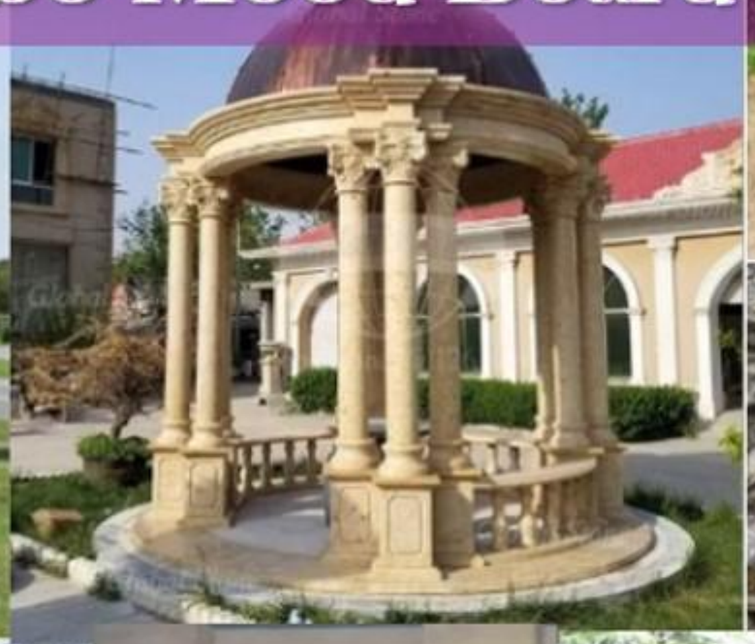
1. Benches built into the three Gazebo pieces
2. Straight benches that are separate to the Gazebo pieces that go between them
3. Rounded benches that are separate to the structure and go within the Gazebo pieces



Could add colour by adding Ivy, Dogwood, Yarrow and/or Edelweiss

Stone Gazebo Mood Board















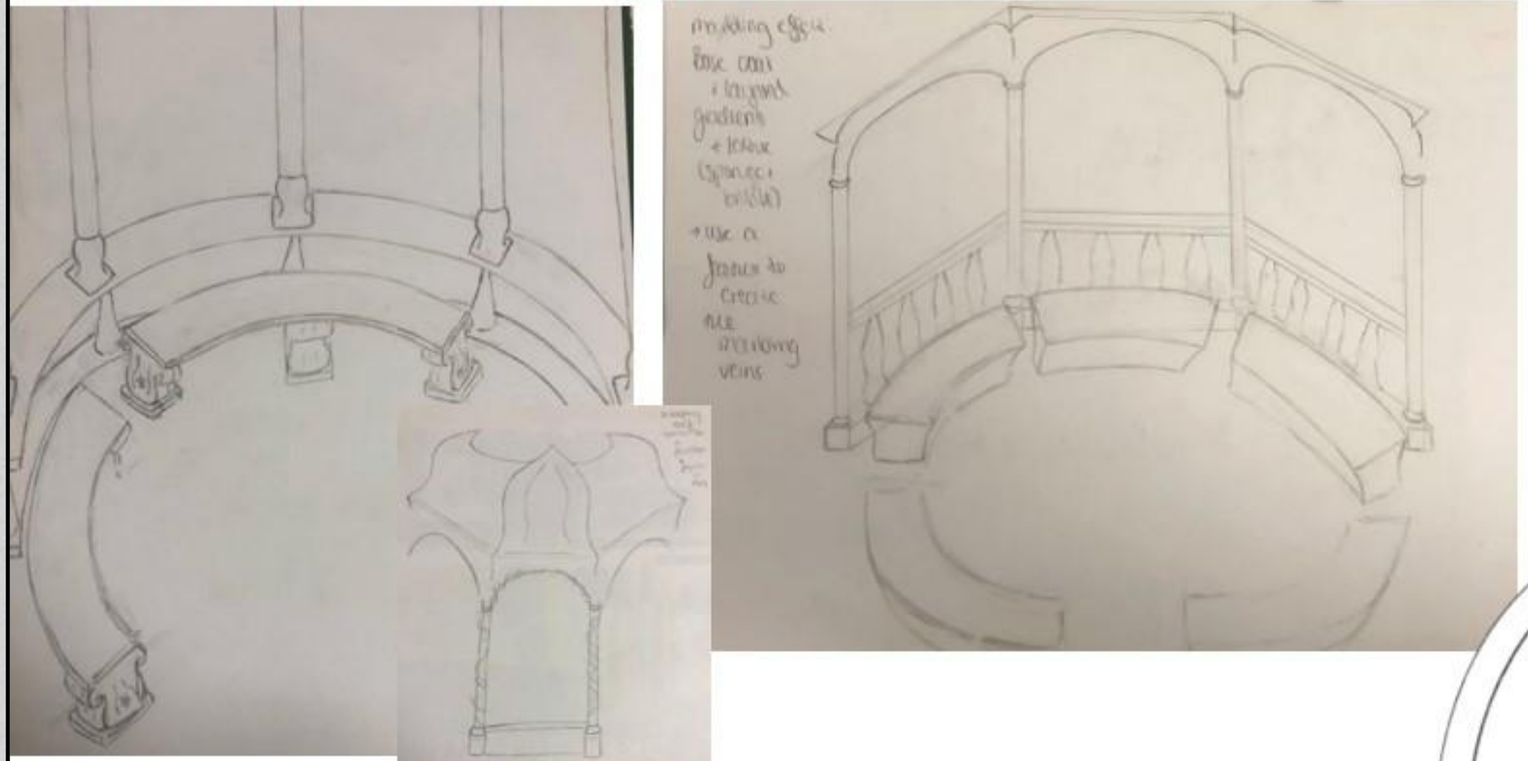








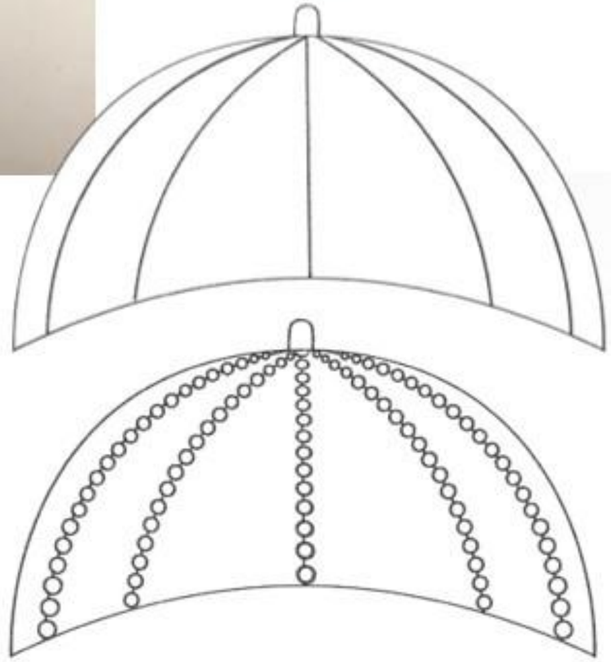
Stone Gazebo Sketches:



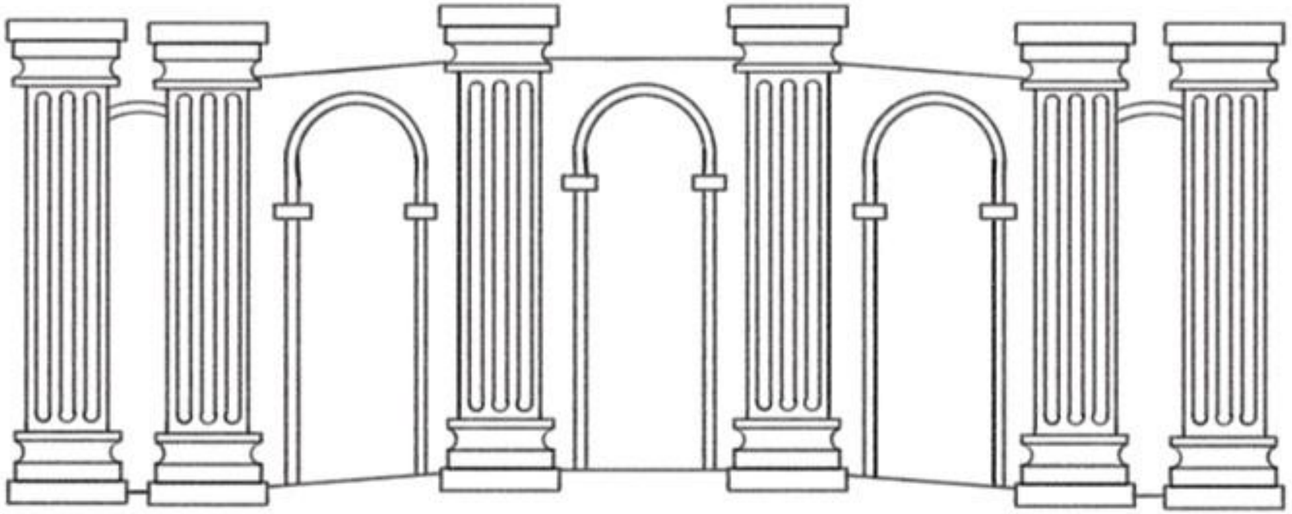
- Two Parts that make up a semi circle
- Roman baroque inspired, design links to the Exterior of the house
- Curved benches that align with the walls











- One part, folds to create the angles of the gazebo
- Larger focus on columns, grander stone/marble design











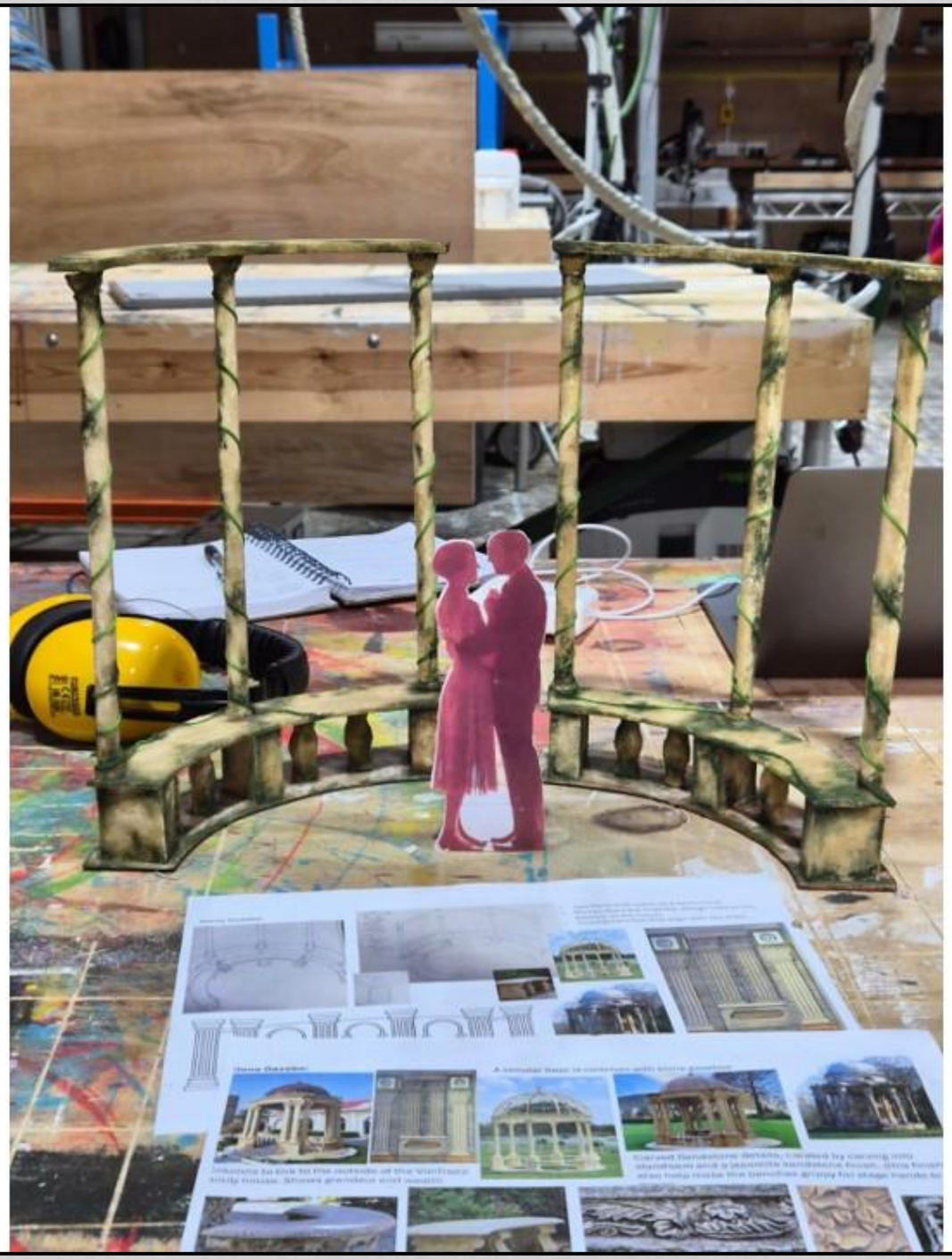


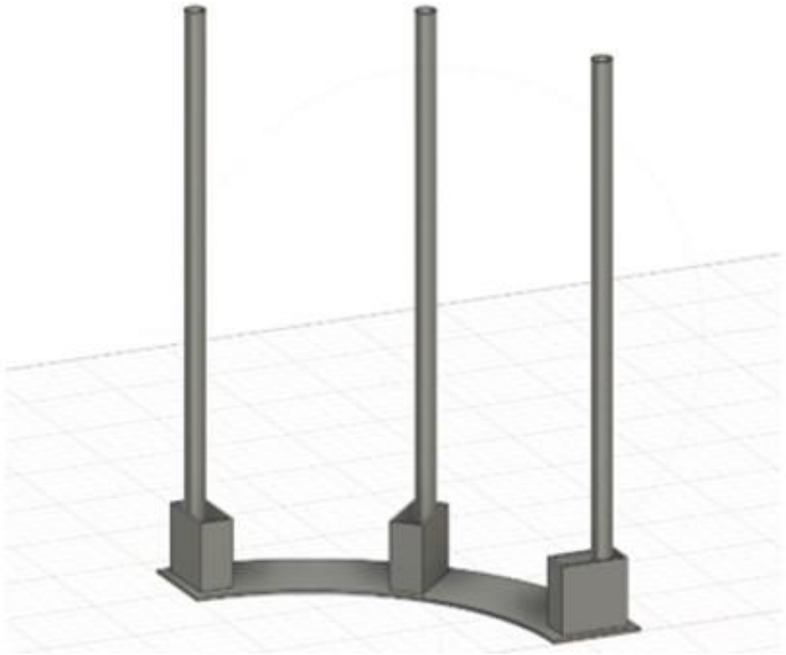
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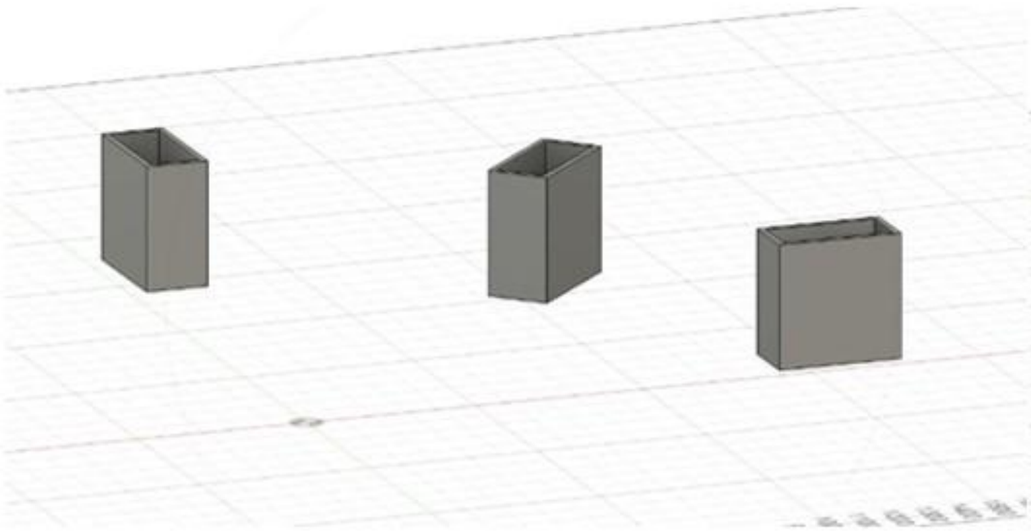
Cam, Ant

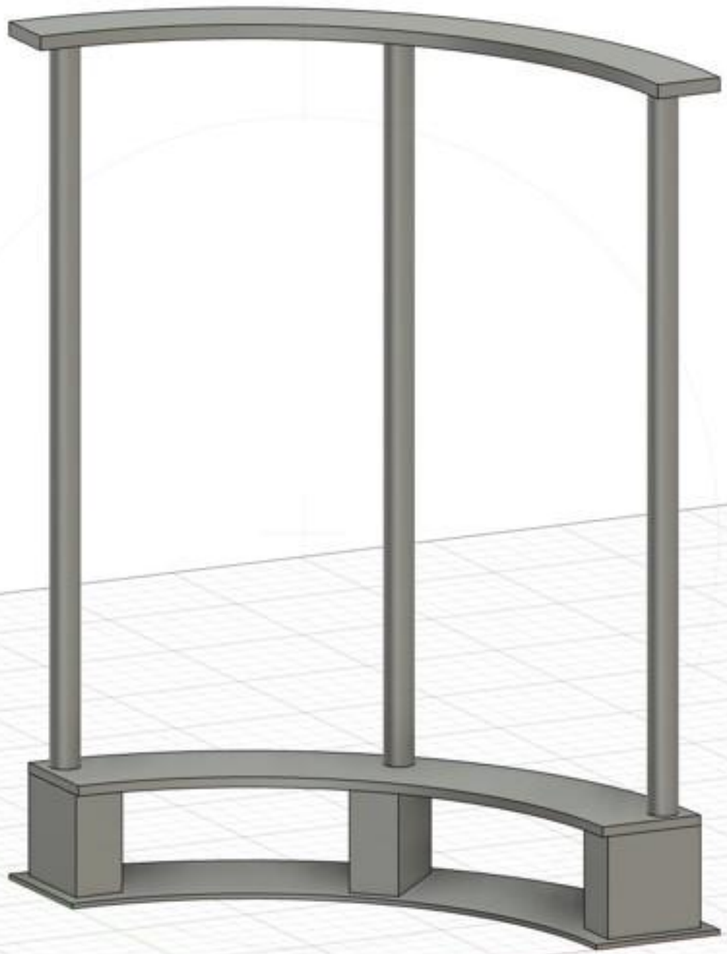
2. What factors influenced your decisions about scale, proportion, and structural layout, and how effectively do you think these choices support the intended performance context? GAZEBO

- Prototype
- Model
- Fusion screenshots







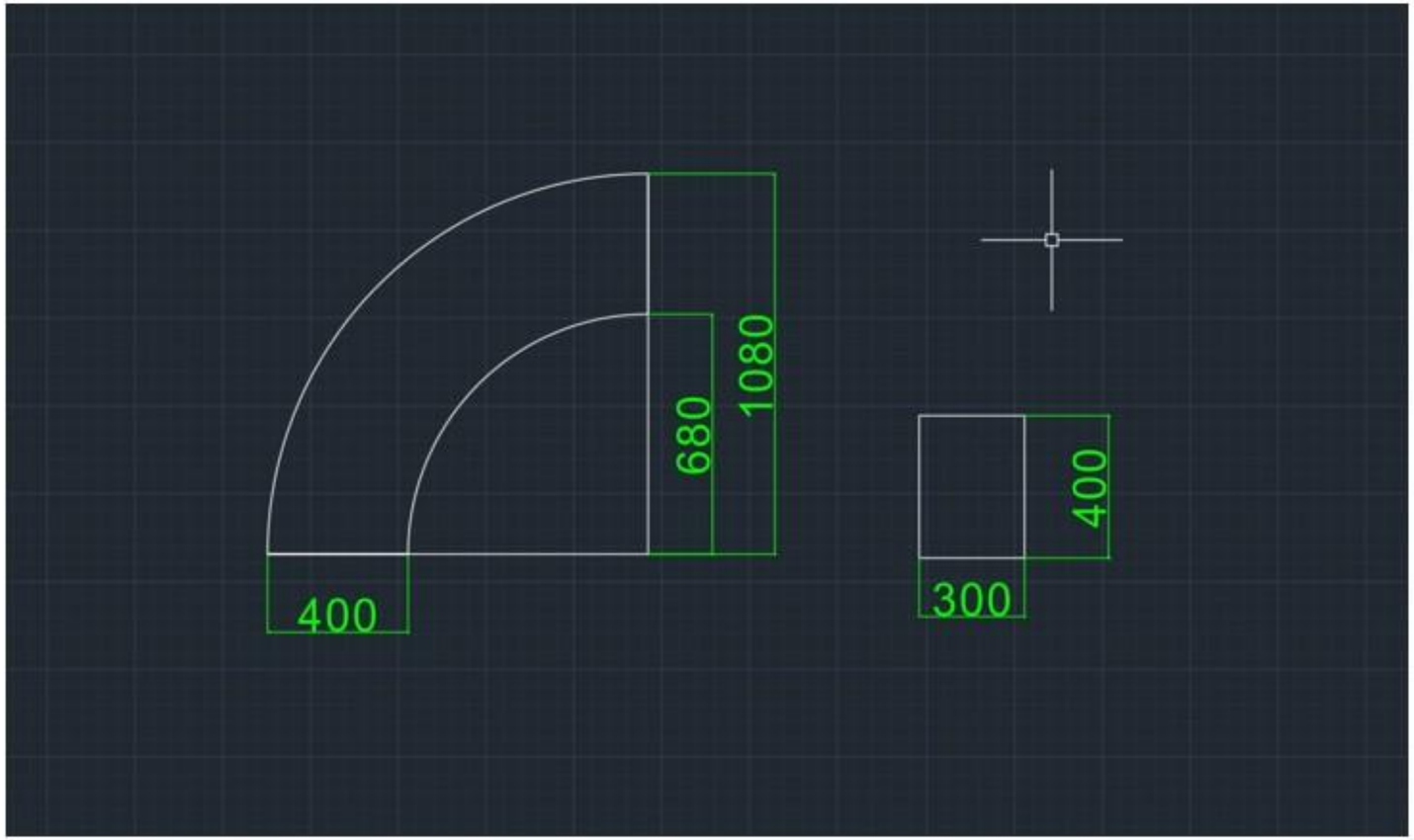


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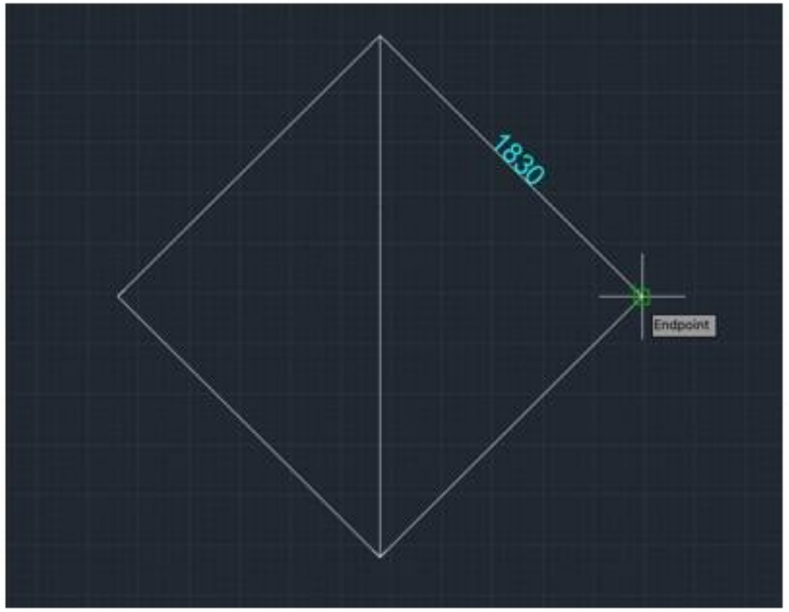
Ant, Alaya

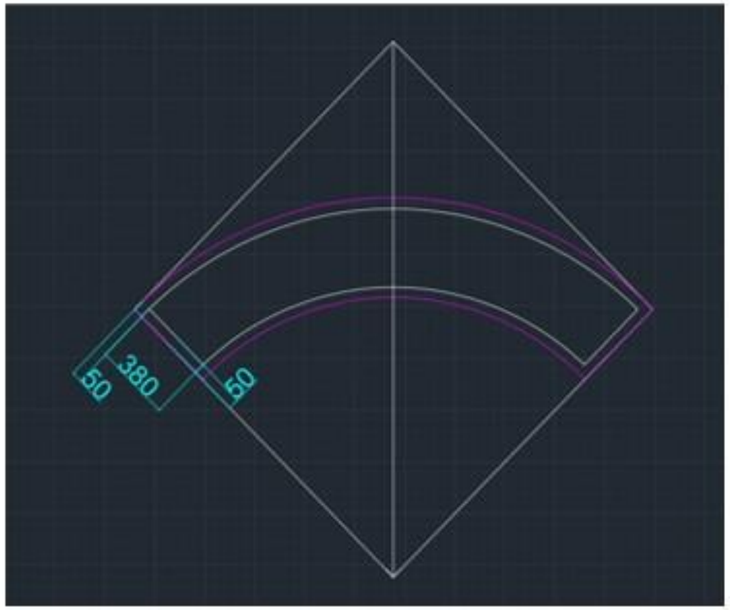
3. Identify any technical or structural challenges you encountered during construction. How did you adapt your process or problem-solve to maintain design integrity? GAZEBO

- CAD
- Polystyrene form
- Construction photos – toggles in the ceiling piece and box inside the box
- Cutting the Arcs
- The Vases

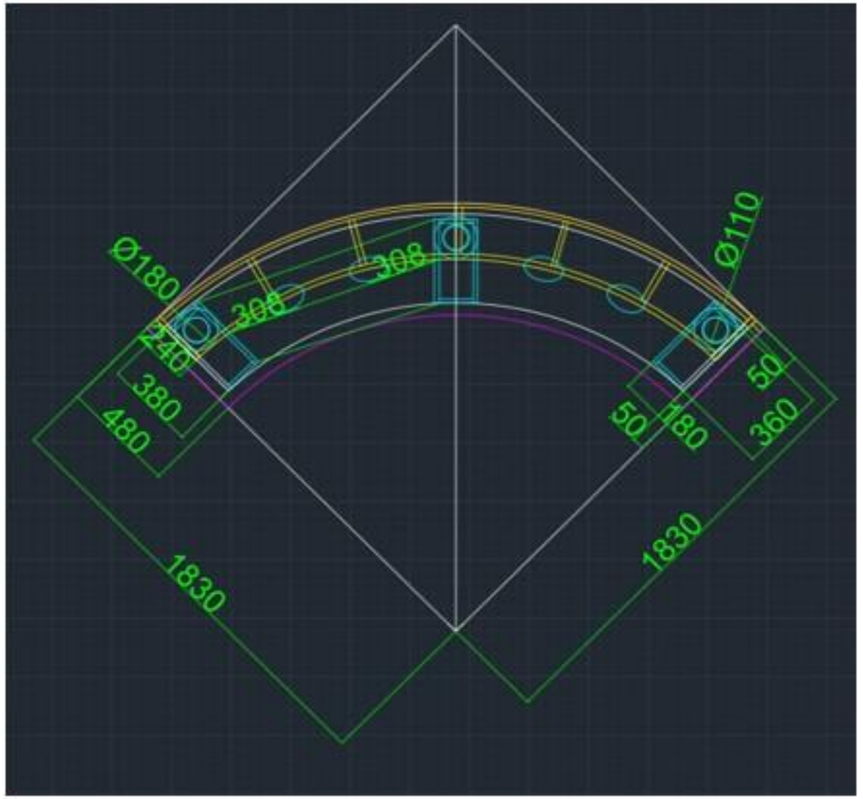


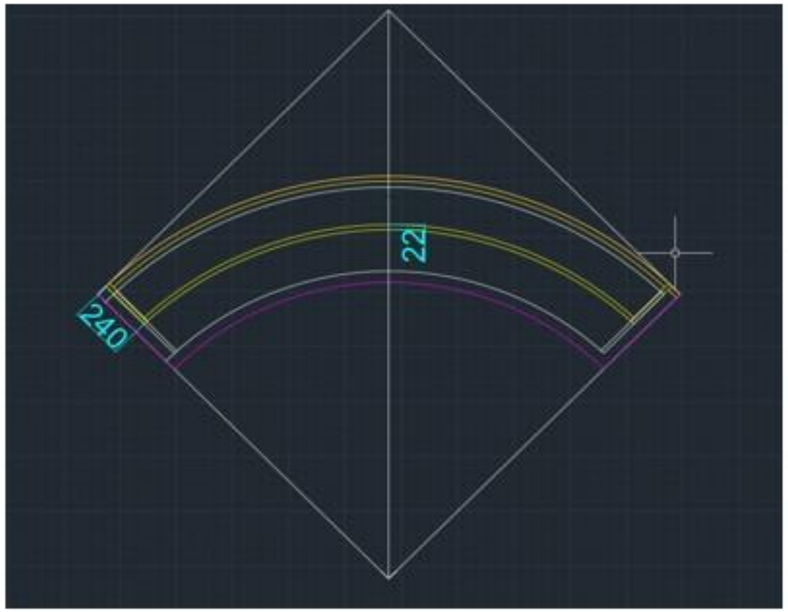
Technical drawing for the prototype – ended up making curve out of 1200mm as that was the largest piece of scrap 18mm available

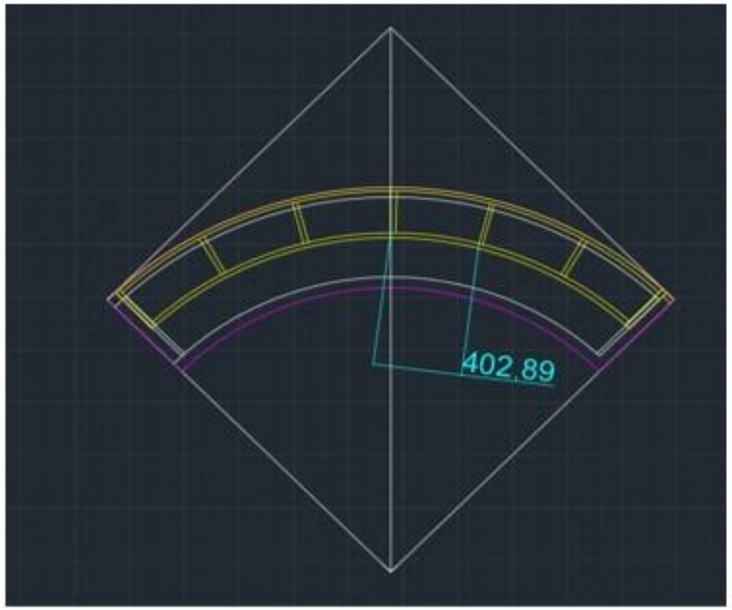




Our process of working out the arc size and how to construct it

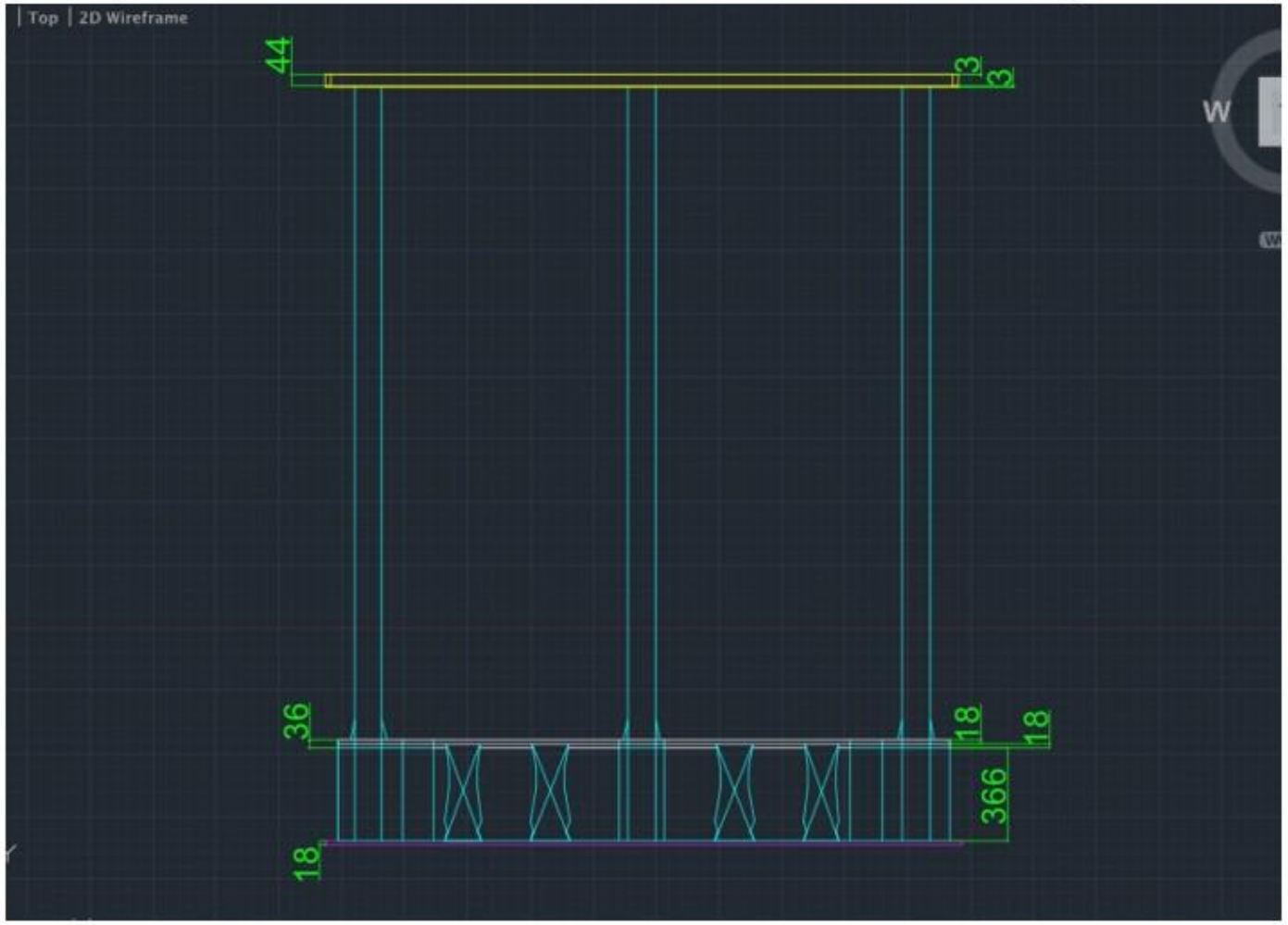


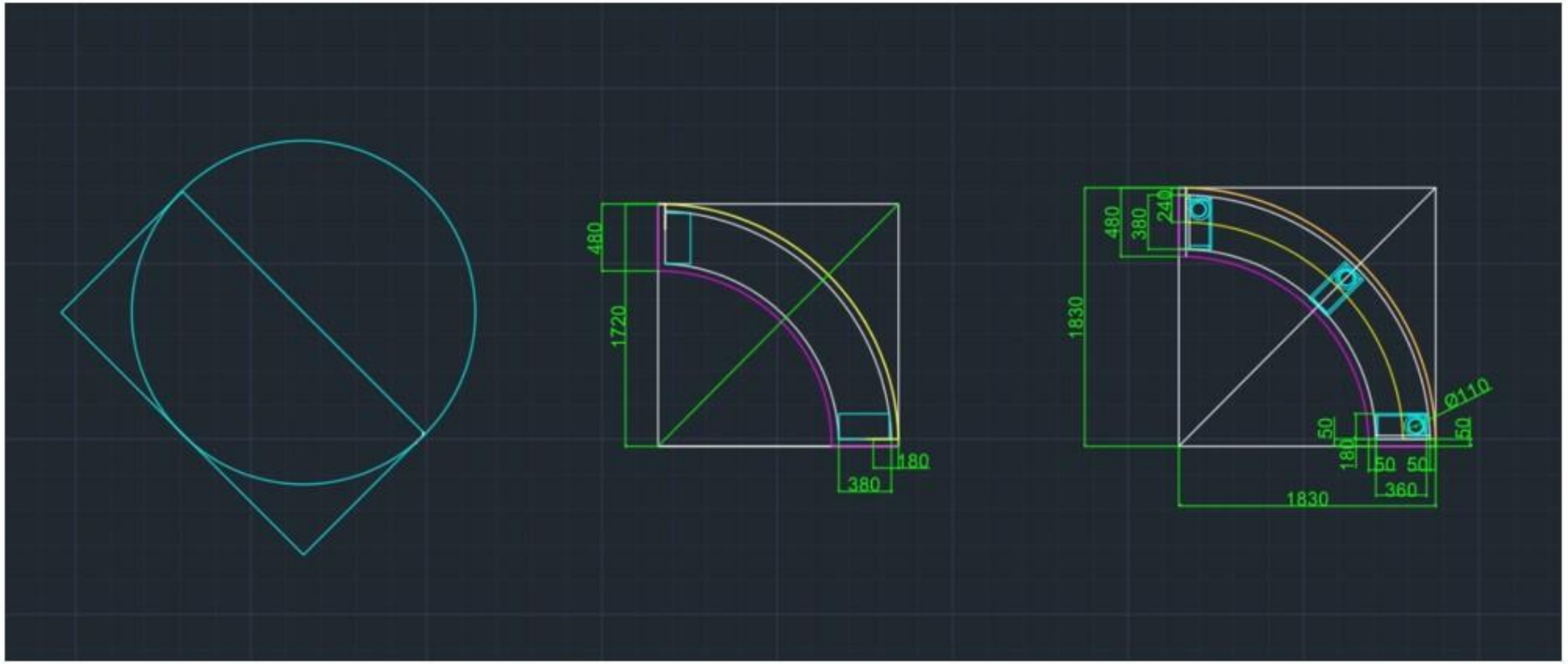






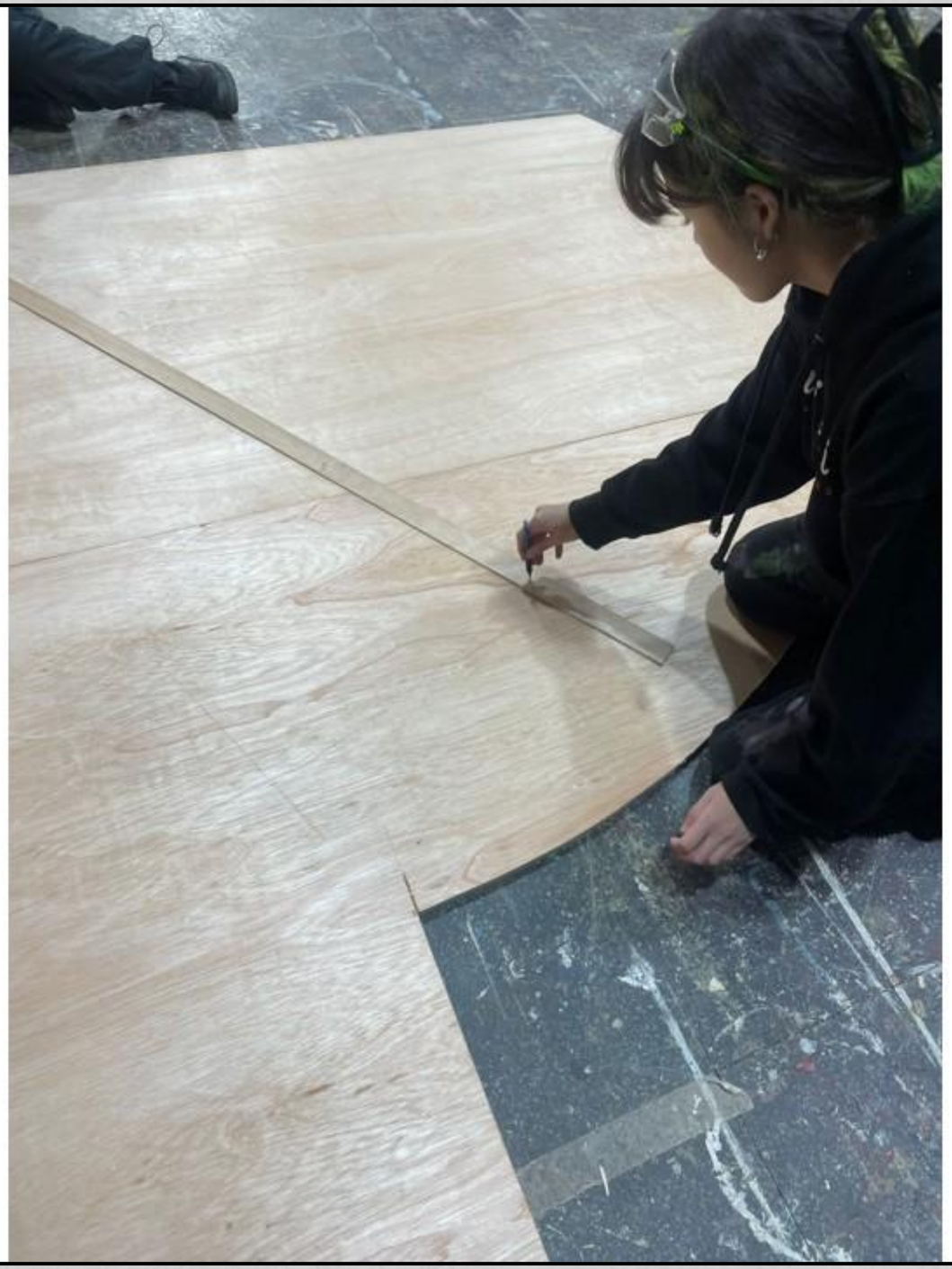
Using construction lines to build a face-on view from the pan view

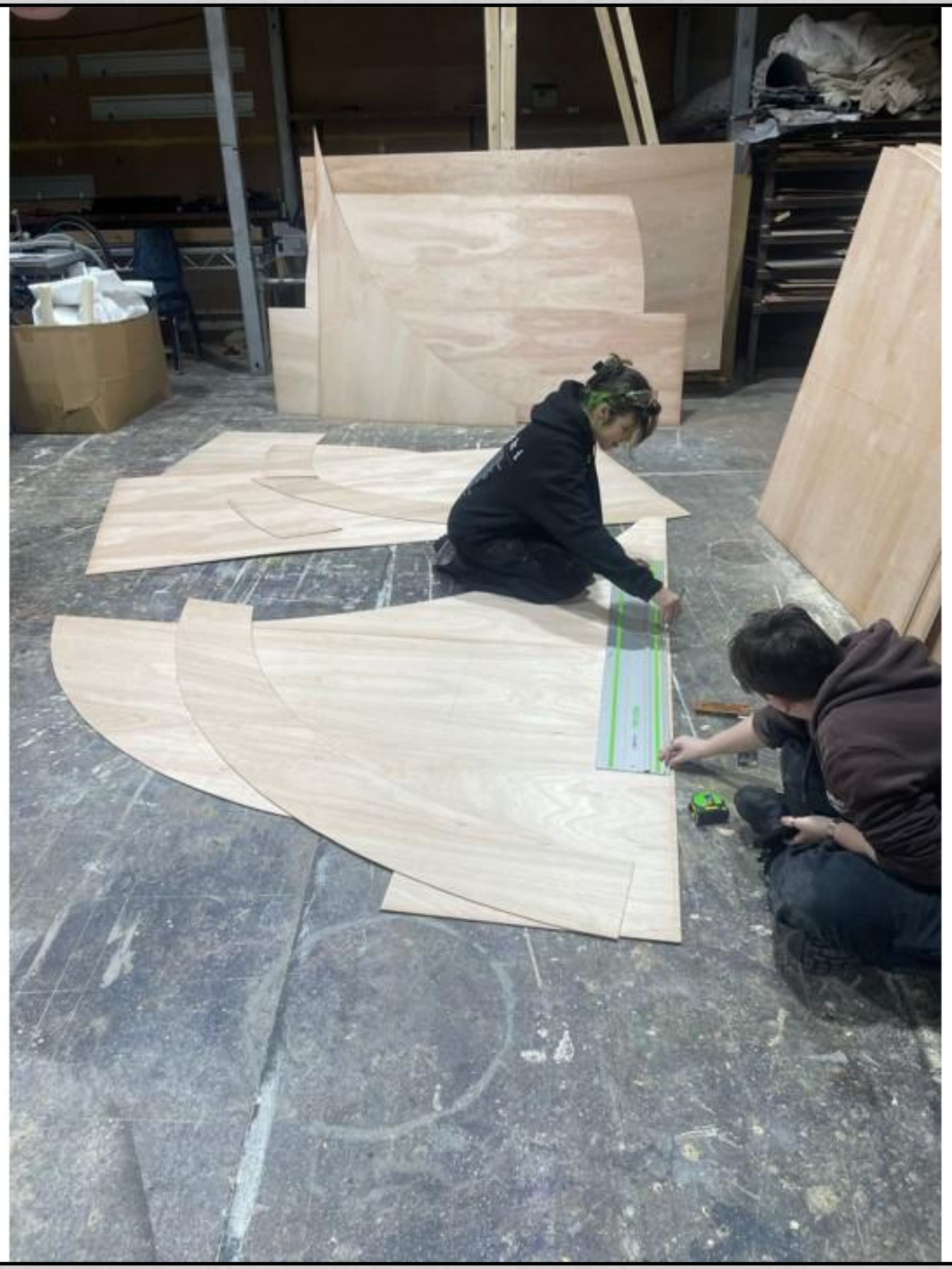




For the purpose of cutting costs, we did consider making our Gazebo smaller so the Base, bench and ceiling layers could be cut from a single sheet of 8x4ft ply. However, this would have altered our initial design too much, taking the arc radius from 1830mm to 1720mm.

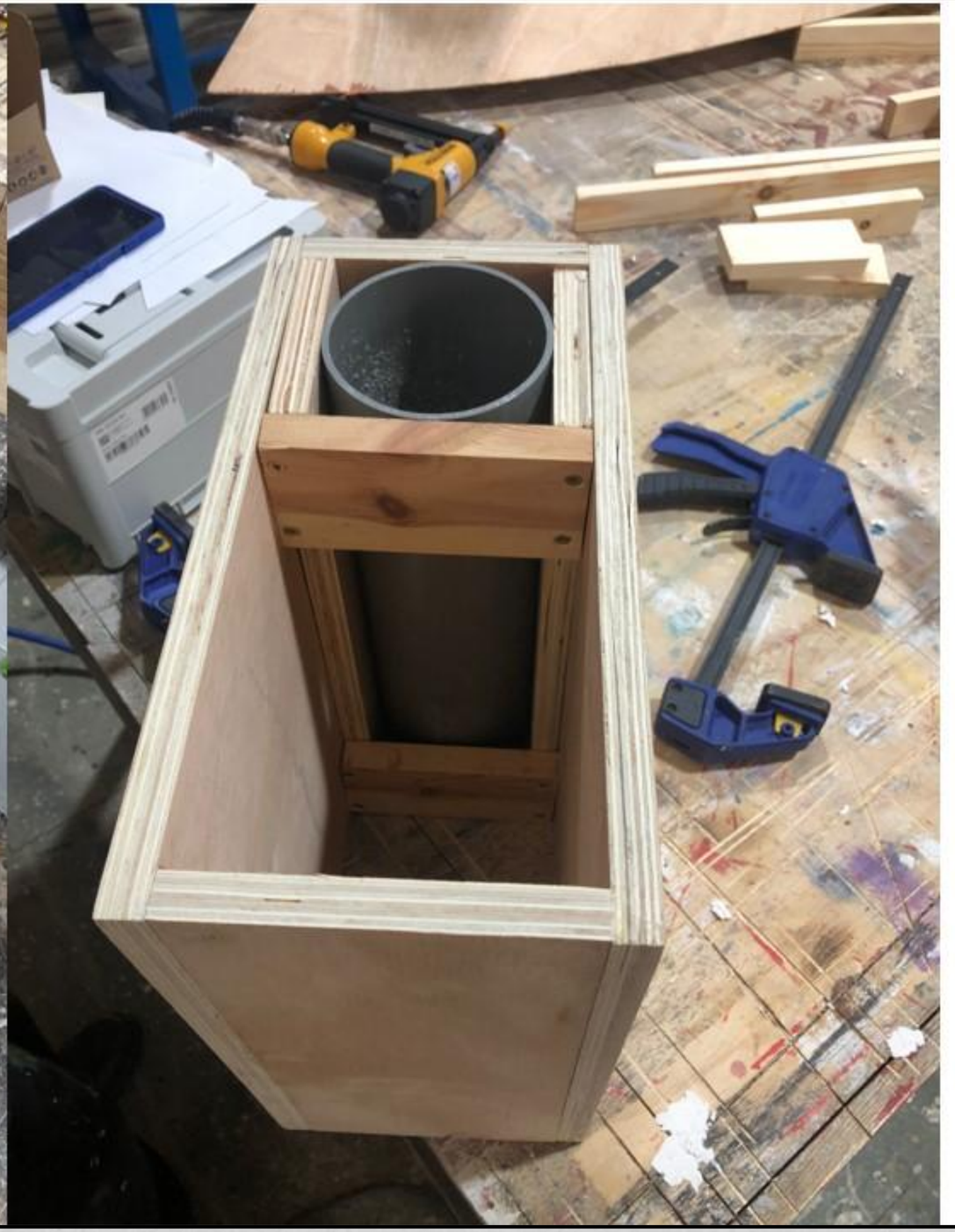












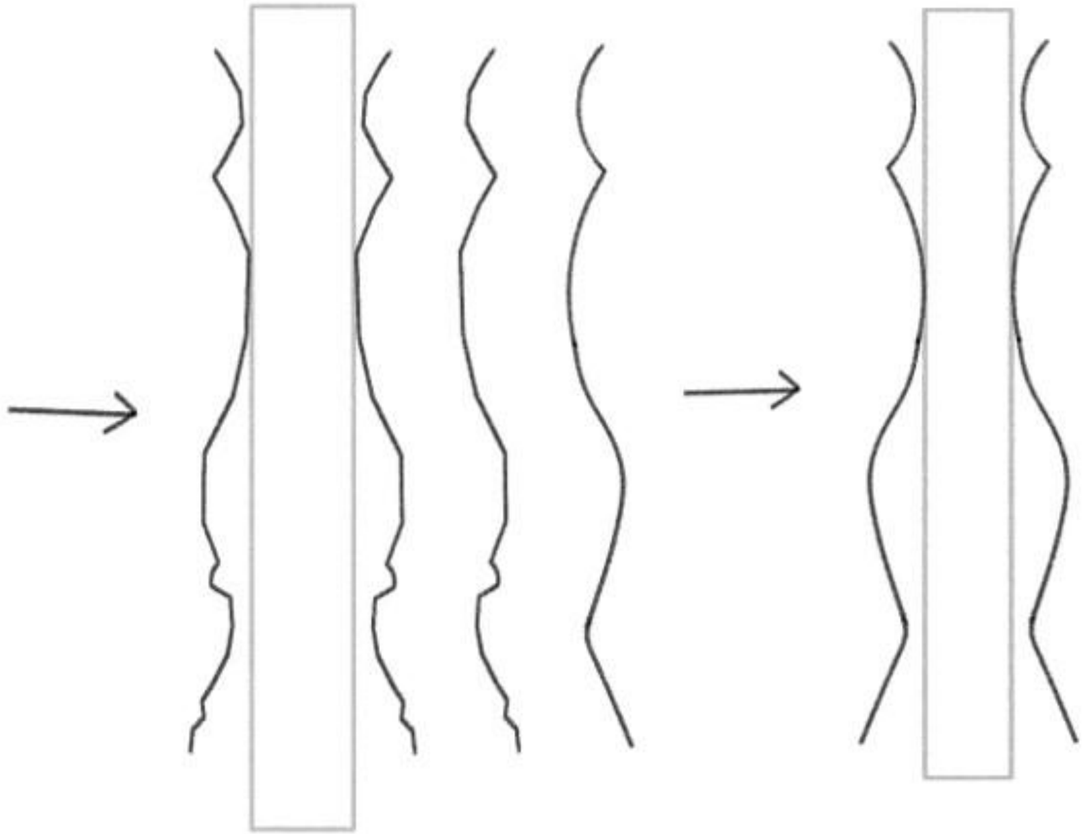


















HIDDEN:

Alaya, Alice

4. Reflecting on the completed pieces, what aspects of your design, construction, or painting would you refine further, and why? Consider both creative and practical improvements. GAZEBO

- Show Carving in the boxes references
- Show more images of process
- Orders (practical improvement to not slow down construction)







Our dirtying down process using synthetic and natural sponge, spray bottles, dry brushing









The world our Gazebo belongs to:







Item	Source	Link	Quantity	Cost item(s)	Shipping	Total
Flintex	Flints	https://www.flints.co.uk/products/pg_Pliable_Coatings/PATFHS810	1 x 10L	£88.98	£11.95	£88.98
Bristol Yellow Ochre	Flints	Flints bristol-superscenic-paints/BSS11046	1x 1kg	£28.71	^	£28.71
Bristol Burnt Umber	Flints	https://www.flints.co.uk/product/all/bri11091	1x 1kg	£14.74	^	£14.74
Bristol white	Flints	https://www.bristolpaint.com/paints/p/base-coat-white-1000 OR Flints Bristol-StandTex-White-3kg	1x 1kg 1x 3kg	£8.64 for 1kg OR £23.59 for 3kg (if the other group need primer)	^	Depends on quantity - £8.64 or 23.59
Covent Garden Primer (need to double check if we have any in workshop)	Flints	https://www.flints.co.uk/product/all/pat0504	For 2.5L = £54.50 For 23.2m^2 of coverage we need 2.9L - may have some left over need to check, if not we	£95.50 (to account for both the bridge and Gazebo)	^	£95.50

			need more For 5L = £95.50			
Artificial English Ivy	Evergreen Direct	Evergreendirect artificial-ivy-vine Code HAVE10OFF for 10 % off (you're welcome)	18x for Gazebo 14x for Bridge 22x total	£86.9 (£3.95pp)	Free	£86.90
Artificial Edelweiss	DecoFlora	https://silkflowersdecoflora.co.uk/artificial-silk-edelweiss	x3	£8.91 (2.97pp)	£5.95	£14.86
Sand	Wickes	Suburban-Play-Sand---20kg	3x	£15 (£5 pp)	£4.00	£19
Feather Dusters	Amazon	Sandis Anti-Static Ostrich Feather Fur Brush Duster Dust Cleaning Tool with Wooden Handle Household	X2	£12.30 (£6.15 pp)	Free	

Item	Product Link	Price (inc. VAT)	Quantity	Shipping	Total	Processing	Ordered	Arrived
110mm PVC Pipe	Pembrokeshire Building and Plumbing Supplies	£ 19.00	6		£ 114.00	☑	☑	☑
Hot Bed Handle (tree handles)	https://www.flints.co.uk/product/pg_handles_/DOR063	£ 2.97	2		£ 5.94	☑	☑	☑
4x2 Softwood	Pembrokeshire Building and Plumbing Supplies	£ 12.50	4		£ 50.00	☑	☑	☑
3mm Plywood	Pembrokeshire Building and Plumbing Supplies	£ 26.50	2		£ 53.00	☑	☑	☑
18mm Plywood	Pembrokeshire Building and Plumbing Supplies	£ 31.80	6		£ 190.80	☑	☑	☑
100mm Polystyrene	Pembrokeshire Building and Plumbing Supplies	£ 19.00	8		£ 152.00	☑	☑	☑
110mm PVC pipe	Pembrokeshire Building and Plumbing Supplies	£ 31.80	8		£ 254.40	☑	☑	☐
18mm Plywood	Pembrokeshire Building and Plumbing Supplies	£ 31.80	6		£ 190.80	☑	☑	☑
3mm Plywood	Pembrokeshire Building and Plumbing Supplies	£ 30.00	4		£ 120.00	☑	☑	☑
2x1 Softwood	Pembrokeshire Building and Plumbing Supplies	£ 1.26	30		£ 37.80	☑	☑	☑
Flintex (10L)	https://www.flints.co.uk/products/pg_Pliable_Coatings/PATFHS810	£ 106.78	1		£ 106.78	☑	☑	☑
Bristol Chrome Yellow (1kg)	flints Chrome-Yellow-(1kg)	£ 22.90	1		£ 22.90	☑	☑	☑
Bristol Burnt Umber (3kg)	flints Burnt-Umber-(3kg)	£ 37.33	1		£ 37.33	☑	☑	☑
Covent Garden primer(2.5L)	flints Covent Garden Primer (2.5L)	£ 65.40	1		£ 65.40	☑	☑	☑
Muslin Scrim (4ft x 1m)	flints Muslin-4ft-wide-(per-m)	£ 3.84	5		£ 19.20	☑	☑	☑
Bristol AquaLak (1L)	https://www.flints.co.uk/product/water-based-glazes/BRIAQ002	£ 43.32	1		£ 43.32	☑	☑	☑
Artifical Edelweiss	https://silkflowersdecoflora.co.uk/artificial-silk-edelweiss	£ 2.97	3	£ 5.95	£ 14.86	☑	☑	☑
Artifical Ivy	https://www.evergreendirect.co.uk/product/artificial-ivy-vine/	£ 3.95	22		£ 86.90	☑	☑	☑
Soft Sand (texturing)	https://www.wickes.co.uk/Suburban-Play-Sand---20kg/p/285242?utm_sour	£ 5.00	3		£ 15.00	☑	☑	☑
Feather Duster	https://www.amazon.co.uk/Sandis-Anti-Static-Ostrich-Feather-Cleaning/dp/	£ 6.15	2		£ 12.30	☑	☑	☑
Polystyrene	https://www.custompac.co.uk/polystyrene-cut-to-size?gad_source=1&gad	£ 9.82	8		£ 78.56	☑	☑	☑
Expanding Foam (polystyrene to wood)	soudal-gap-filling-expanding-foam-combi-trade-pack	£ 53.99	1		£ 53.99	☑	☑	☑
Plastazote	PlastazoteLD33 - White Closed Cell Foam 200x100cm	£ 29.99	1	£ 11.99	£ 41.98	☑	☑	☑
Sponge	https://www.screwfix.com/p/essentials-sponge-112mm-x-210mm/359VE?t	£ 0.95	3		£ 2.84	☑	☑	☑
Screws (30mm)	https://www.toolstation.com/single-thread-countersunk-pozi-screw/p3497(	£ 1.68	18		£ 30.24	☑	☑	☑
Wire	https://www.amazon.co.uk/Aluminum-Bendable-Sculpting-Modelling-Skele	£ 5.99	1		£ 5.99	☑	☑	☑
Contact adhesive	https://www.screwfix.com/p/evo-stik-impact-adhesive-off-white-amber-25(	£ 2.50	2		£ 5.00	☑	☑	☑
Flints shipping					£ 11.95			
TOTAL					**£ 1,823.28**			

Trees
Bridge
Gazebo
Banners



Thank you for listening, any questions?

The Presentation

How I think the presentation went:
Overall, I think the presentation went well, but there are definitely areas we could improve on. I really liked that the Bridge group spoke about pricing and how it directly influenced their design choices. That's something we didn't focus on as much, and in hindsight, it would have been useful to explain more clearly how budget considerations shaped some of our decisions. I also appreciated that they were open about the hurdles they faced, they didn't gloss over the difficult parts, and I think that's important because we can learn a lot from each other's mistakes as well as successes. As a group, I think we could have refined our language slightly. Early on in the process, we referred to the polystyrene balusters as 'vases' because we were initially unsure of the correct terminology and kept mixing up 'baluster' and 'banister' in conversations. Within the group, calling them vases became a habit, but during the presentation we should have made a conscious effort to use the correct vocabulary. Using accurate terminology would have made our explanations clearer and more professional.

I also think we may have overthought the Q&A element. Out of habit, we tried to include as much information as possible on the slides and wanted to mention every challenge we encountered. In doing that, we may have spread ourselves too thin. It probably would have been better to focus on two or three key examples and rehearse those properly, rather than attempting to cover a wide range of smaller points. Interestingly, we didn't spend much time talking about the marbling process because we assumed it might not be the most engaging part to explain. However, that ended up being the area we were asked the most questions about. That actually worked well, as it allowed us to expand on it during the Q&A. It reminded me that the purpose of that section is to respond to what the audience finds interesting, rather than trying to predict everything in advance. I really enjoyed this presentation format overall, it felt lower pressure, although we had to remind ourselves of that at times. Because we had less preparation time, the expectation wasn't for perfectly rehearsed, polished segments, which actually made it more relaxed. One thing I've noticed about myself is that I tend to hold back on expanding my points because I'm worried about boring the audience. Once I start speaking, I often just want to get through it quickly and in doing that, I missed the chance to build further on Cam's comments about how we made the base layer moveable through routing. That was a new process and tool for us, and something I'm genuinely interested in developing further when finishing set pieces. I think I could have taken more ownership of that moment and spoken in more depth about what I learned from it.

The Get In

At the end of the day on Tuesday, my group and I made a ‘get in tool kit’ of what we wanted to bring down with us to the Lyric, and we put this on the whiteboard as a reminder for Wednesday morning.

We decided we would like to bring:

- Scissors
- Wood staple gun & staples
- Screwdriver & screws (suitable for securing the ceiling and poles down)
- Fishing wire
- Paint mixes of the beige Gazebo shade, green and brown dirtying shades and possibly the texture too and a trowel for any touch ups from damage that may occur in transit
- Paint brushes
- Vaseline
- Gloves
- Sanding paper







We packed these items into boxes and labelled them so they could be stored in the Lyric for the period of the shows runs. The next morning, we took apart our Gazebo and loaded it into the van.

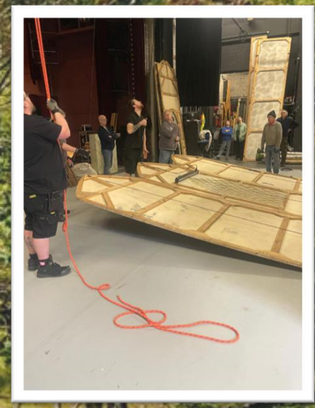
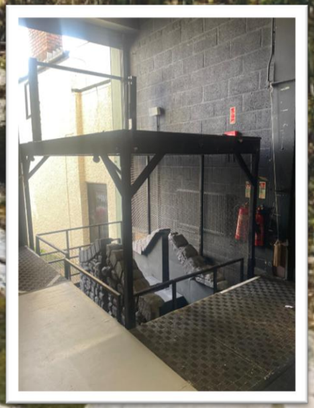
The Get In

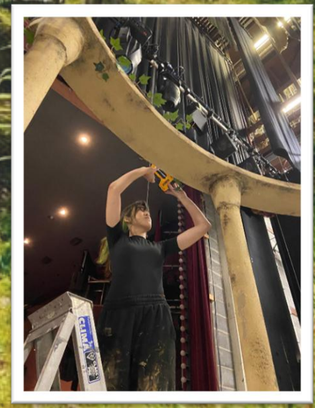
How I think the Get In went:

- The get in was a success but it was a little more time consuming than we had anticipated. On our arrival, the team at the Lyric were putting up the flies which meant we were unable to use the space to put our Gazebo together. Instead, I took this opportunity to observe their process as I had never put up flies before.
- We had some instances where we realised elements had been miscommunicated. Such as, there was a dance floor down which we were unaware of. This meant our Gazebo cannot be skated along the floor or this would damage the dance floor. We gave the CYO team our dollies as an option for them to wheel the Gazebo on and off stage.
- Once we were able to use the stage space to put our builds together, we placed the columns into their assigned bench leg and fixed the ceiling in place with a screw going through the top of the Gazebo, into the 18mm discs we had screwed to the top inside of the columns. Then, we used some fishing wire to tie the Ivy up (fishing wire is great for things like these because its very strong but so fine that its practically invisible). The wood staple gun of course only worked on the wooden bench and legs, otherwise we stuck with using the wire to hang the Ivy. Then, we added the Edelweiss flowers by intertwining them with the ivy and wire to secure them to the Gazebo.
- I found that I felt under pressure to do this quickly, so we did rush this process to get out of the CYO's hair. I was disappointed in myself because it meant I wasn't making slight corrections like making sure the columns were facing the correct way so there was no overhang, as we had build the Gazebo in our workshop







Evaluation

This project of working with the Carmarthen and District Youth Opera to bring the sets to life for The Sound of Music at the Lyric Theatre, was one of the most challenging yet rewarding experiences I've had so far on the course. From the beginning of the module, I decided I would make a conscious effort not to rely too heavily on asking for help and instead focused on trying to troubleshoot within the group. As a result, I learned a great deal from others, particularly from Ant with tips on using the jigsaw, from Alaya with template-making and working with Plastazote and from Cam with Scenic Art techniques and application. Moreover, observing how they approached practical tasks helped me develop more confidence in my own abilities in the workshop.

Throughout the process, I realised that I naturally step into a leadership role. Previously, I viewed this as a negative trait, however, I now recognise it as a strength. Within a team, I like to keep momentum going and ensure we are using our time efficiently. I find satisfaction in tracking progress and making sure tasks are moving forward. That said, I am by no means the most technically skilled builder in the group, and despite taking on that organisational role, I would have struggled without the team's combined skills. This project reinforced how essential collaboration is, everyone contributed something different, and together we achieved more than any of us could individually.

In this module, I found that I genuinely enjoy being in the workshop and making things with my hands. There is something very rewarding about physically constructing a set piece and seeing it develop over time. On top of this, working practically feels far more engaging to me than sitting at a desk. What made the experience especially positive was that we had a clear plan, communicated openly, checked in with each other regularly, and remained proactive. Even when the workload became heavy, we maintained a steady pace and supported one another.

Evaluation

One challenge I encountered was that I find when I take on a leadership role, I am often asked, “What do I do now?” At times, this was frustrating, as I believe everyone should feel able to check the to do list that we wrote together at the beginning of each day on the whiteboard; review the technical drawings, or identify where help is needed without direct instruction. In previous work settings, I have learned that time spent asking what to do can slow overall progress unless you genuinely have no idea. However, I came to understand that everyone has different working styles. Some people may want to contribute but feel unsure how to step in. Because of this, I found that offering clear choices, for example, between sanding cones or helping apply texture, helped maintain momentum while keeping the atmosphere positive.

I did find the construction phase intense and time-consuming. Consequently, I did fall slightly behind on my workbook. Although I typed my notes up each evening, the pace and scale of the work made it difficult to document everything in full detail. Despite this, I was proud to be part of a group that was not discouraged by the size of the task. Overall, this project allowed me to grow both practically and personally. Not only did I develop technical skills, but I also gained a better understanding of my role within a team. Although the process was demanding, it was equally enjoyable, and seeing the finished gazebo come together made the hard work worthwhile. I look forward to working with the Youth Opera over the coming week, it will be one of my first proper experiences working backstage in a theatre and I am excited to continue working alongside my peers and learning from other volunteers and the professionals at the Lyric Theatre.

Evaluation





Some images from the Dress rehearsal posted on the Carmarthen Youth Opera's Facebook Page. Photographs by Sean Tapp (Tappix.co.uk, 2026)

Bibliography

Carmarthen and District Youth Opera (2025) *Elizabeth Evans M.B.E.* [Image] Available at: https://www.youthopera.co.uk/founding/ (Accessed 15 December 2025)
Carmarthen and District Youth Opera (2025) *Snow White 1979* [Image] Available at: https://www.youthopera.co.uk/snow-white-1979/ (Accessed 15 December 2025)
Carmarthen and District Youth Opera (2025) *Director - Rhian Holsworth* [Image] Available at: https://www.youthopera.co.uk/directors/ (Accessed 15 December 2025)
Carmarthen and District Youth Opera (2025) *President - Wyn Davies* [Image] Available at https://www.youthopera.co.uk/musical-directors-2/ (Accessed 16 December 2025)
Carmarthen and District Youth Opera (2025) *Chairman and Treasurer - Mike Rogers* [Image] Available at https://www.youthopera.co.uk/musical-directors-2/ (Accessed 16 December 2025)
Scourfield, A. for BBC Wales (2022) *Save the Cinema: How Jurassic Park helped Carmarthen theatre* [Video] Available at: https://www.bbc.co.uk/news/uk-wales-59940146 (Accessed 16 December 2025)
Rodger and Hammerstein (2025) *Mary Martin, Lauri Peters and the rest of the child cast of the original 1959 stage show, Lunt-Fontanne Theatre* [Image] Available at: https://rodgersandhammerstein.com/production/the-sound-of-music/1959-original-broadway/ (Accessed 16 December 2025)
Rodgers and Hammerstein (2025) Stills from The 1959 SOM Original Broadway production (from the R&H Archives) [Image] Available at: https://rodgersandhammerstein.com/production/the-sound-of-music/1959-original-broadway/ (Accessed 17 December 2025)
Rodgers and Hammerstein (2025) *Mary Martin, Lauri Peters and the rest of the child cast of the original 1959 stage show, Lunt-Fontanne Theatre* [Image] Available at: https://rodgersandhammerstein.com/stills/stills-from-the-1959-som-original-broadway-production/ (Accessed 17 December 2025)
NYC Landmarks Preservation Commission (2018) '*16 November 2018, On this day i*n 1959, the musical The Sound of Music by Richard Rodgers and Oscar Hammerstein opened at the Lunt-Fontanne Theatre, it is one of the oldest theatres in the Broadway theatre district' [Image] Available at: https://www.facebook.com/photo.php?fbid=2471635799532463&id=133261836703216&set=a.570041393025256 (Accessed 17 December 2025)
Rogger and Hammerstein (2025) *About* [Website] Available at: https://rodgersandhammerstein.com/about/ (Accessed 17 December 2025)
Abebooks (2025) *Story of the Trapp Family Singers – Hardcover Von Trapp, Maria Augusta (1981)* [Image] Available at: https://www.abebooks.co.uk/servlet/BookDetailsPL?bi=32313226274&dest=gbr&ref_=ps_ggl_2039220669_72781151940&cm_mmc=ggl-_-UK_Shopp_Tradestandard-_-product_id=UK9780397000180USED-_-keyword=&gad_source=1&gad_campaignid=2039220669&gbraid=0AAAAD3Y6gvH3kNQQsoy9wrCw8sZpZQXX&gclid=Cj0KCQiA7-rMBhCFARIsAKnLKtDSQjdIoJlzKvACVRHbFmzE8msDrBzYcJhUME9q46BXlzksp9y4VVYaAj8PEALw_wcB (Accessed 17 December 2025)
Bartko-Reher (2017) *Postcard of Salzburg, Hohensalzburg Fortress 1930* [Image] Available at: https://www.zvab.com/manuskripte-papierantiquitaeten/Ansichtskarte-Salzburg-Festung-Hohen-Salzburg/32145073737/bd (Accessed 18 December 2025)

Bibliography

The holocaust explained (2025) *The Weiner Holocaust Library A map of how the Anschluss (March 1938) took place* [Image] Available at: https://www.theholocaustexplained.org/life-in-nazi-occupied-europe/foreign-policy-and-the-road-to-war/anschluss/ (Accessed 18 December 2025

ABC (2023) *Austrian women wave swastikas at Salzburg to celebrate the union of Austria and Germany (Anschluss) following the German occupation. Getty Images* [Image] Available at: https://www.abc.net.au/listen/programs/nightlife/anschluss/102086780 (Accessed 20 December 2025)

BBC News World Service (2024) *Austrians welcoming German troops (1938). Keystone/ Hulton Archive/Getty Images* [Image] Available at: https://www.bbc.co.uk/programmes/p00rg2jv (Accessed 20 December 2025)

AESU (2015) *Salzburg sits on the border between Austria and Germany and is the capital city of the province which bears its name (1932)* [Image] Available at: https://www.aesu.com/salzburg/ (Accessed 20 December 2025)

Rodgers and Hammerstein (2019) *25 Rarely Seen Photos from the Sound Of Music Set: Directing "Do-Re-MI" (The Sound Of Music Handbook)* [Image] Available at: https://rodgersandhammerstein.com/25-rarely-seen-photos-from-the-sound-of-music-set/ (Accessed 21 December 2025)

Rodgers and Hammerstein (2019) *25 Rarely Seen Photos from the Sound Of Music Set: The Fox Studios Lot, 20th Century Fox* [Image] Available at: https://rodgersandhammerstein.com/25-rarely-seen-photos-from-the-sound-of-music-set/ (Accessed 21 December 2025)

Central European Economic and Social History *(2018) Mother Lola and her daughter, Herta, in traditional costume 1943 in the Alps* [Image] Available at: http://centraleuropeaneconomicandsocialhistory.com/the-alps-past-time-of-the-young-viennese-in-the-1920s-1930s (Accessed 21 December 2025)

Münzversand Mag. Peter Macho (2020) Salzburg postcard lot 1900-1930, 3 pieces: Staatsbrücke, Residenzplatz plus 1 St. Linderhof, used [Image] Available at: https://www.ma-shops.com/macho/item.php?id=1638 (Accessed 21 December 2025)

ALCCA (2025) *Swastika Awareness Coalition. The Swastika and the Hakenkreuz: Understanding the Difference* [Image] Available at: https://www.alcca.ca/post/sacred-symbols-and-hate-symbols-understanding-the-difference-swastika-hakenkreuz Accessed (Accessed 21 December 2025)

Harry S Truman library (2015) World War II soldiers with captured Nazi flag (1945) [Image] Available at: https://www.trumanlibrary.gov/photograph-records/72-3951 (Accessed 21 December 2025)

Vulture (2019) *The Sound of Music live: review* Katlzburg Festival Scene [Image] Available at: https://www.vulture.com/2013/12/the-sound-of-music-live-highs-lows.html (Accessed 4th January 2026)

Door County Today (2019) *Actors Sean Fortunato and Linda Fortunato in "Talley's Folly" by Lanford Wilson* [Image] Available at: https://doorcounty.net/behind-the-scenes-of-talleys-folly-with-director-david-new/ (Accessed 4th January 2026)

Bibliography

Black Country Metal Works (2025) Ornate Wrought Iron 'Somerford' Garden Gazebo - Midnight Black [Image] Available at: https://www.blackcountrymetalworks.co.uk/ornate-wrought-iron-somerford-garden-gazebo-midnight-black.htm?gad_source=1&gad_campaignid=22989955662&gbraid=0AAAAAD312kwXv5XBf_21U3OJnsMUg86Js&gclid=Cj0KCQiA7-rMBhCFARIsAKnLKtBM4sTz6iy_k5O7WBlFD-nP3wDtyb66yqHylMtgWE7Bs0_0mi2Lj88aAryCEALw_wcB (Accessed 4th January 2026)

Flickr (2014) *Flat on wheels (photo credit unknown)* [Image] Available at: https://www.flickr.com/photos/abithomas/4808241442/?utm_source=Pinterest&utm_medium=organic (Accessed 5th January 2026)

Tourismus Salzburg (2024) *Leopoldskron Palace and the Fortress Hohensalzburg* [Image] Available at: https://www.salzburg.info/en/sights/fortress-palaces/leopoldskron-palace (Accessed 5th January 2026)

Encyclopaedia Britannica*, Inc Austria-Hungary, 1914 Map of Austria-Hungary* [Image] Available at: https://www.britannica.com/summary/House-of-Habsburg (Accessed 5th January 2026)

Vienna unwrapped (2022) Baroque Architecture in Vienna: Schonbrunn Palace [Image] Available at: https://vienna-unwrapped.com/baroque-architecture-in-vienna/ (Accessed 5th January 2026)

Palais Daun Kinsky (2018) *Palais Events* [Image] Available at: https://palaisevents.at/en/palais-daun-kinsky/ (Accessed 9th January 2026)

Expedia (2025) Hotel Schloss Leopoldskron [Image] Available at: https://www.expedia.com/Salzburg-Hotels-Hotel-Schloss-Leopoldskron.h2529728.Hotel-Information?discovery-landing-offers-overlay=discovery-landing-offers-overlay (Accessed 15th January 2026)

Schloss-leopoldskron (2025) *Photo Gallery* [Image] Available at: https://www.schloss-leopoldskron.com/en/indulge-and-experience/photo-gallery?culture=en (Accessed 15th January 2026)

Heart of England Forest (2024) *Silver Birch* [Image] Available at: https://heartofenglandforest.org/silver-birch (Accessed 15th January 2026)

Paramount Plants (2025) *Silver Birch Betula Utilis Jacquemontii* [Image] Available at: https://www.paramountplants.co.uk/plant/plsb/pleached-silver-birch.html?srsltid=AfmBOoplEitKwO_4XSFRojGHqJnobs8HqPHqyWgpncGbM3o34GgoknUc (Accessed 15th January 2026)

Trees by Post (2023) *Silver Birch - Betula pendula* [Image] Available at: https://www.treesbypost.co.uk/products/silver-birch-saplings-betula-pendula?srsltid=AfmBOorjVzP9q4hU0ONvJpHtqClvhDgM3VGMIrvA_WuHlS9SX8PlLSTU (Accessed 16th January 2026)

Flints (2026) *Varaform Gauze Membrane Roll £40.65 (per metre).* [Image] Available at: *https://www.flints.co.uk/product/All/PROVAR221* (Accessed 16th January 2026)

Flints (2026) Varaform Heavy Roll £49.50 (per metre). [Image] Available at: https://www.flints.co.uk/product/varaform/PROVAR201 (Accessed 16th January 2026)

Bibliography

Popperfoto/PPP (2025) The Olympic flame arrives in the stadium surrounded by huge Nazi swastika flags, 1936. [Image] Available at: https://www.theguardian.com/sport/from-the-archive-blog/2021/jul/28/berlin-olympics-1936-advertisement-for-nazi-political-party (Accessed 16th January 2026)

Brooks, M. The Producers (1968) - Springtime for Hitler Clip [Video] Available at: https://www.youtube.com/watch?v=ovCf9VRLnDY&t=30s (Accessed 18th January 2026)

Flints (2026) *Flamecheck PLUS 1* [Image] Available at: https://www.flints.co.uk/product/All/FLA075?proddesc=Flamecheck-PLUS-1-L-&category=flamecheck-plus&catdesc=Flamecheck-Plus (Accessed 21 January 2026)

Flints (2026) *Rosco Flamex PA 8oz additive for paint* [Image] Available at: https://www.flints.co.uk/product/All/ROSPA0128?proddesc=Rosco-Flamex-PA-8oz&category=flame-retarding-additives-for-&catdesc=Flame-Retarding-Additives-For-Paint (Accessed 21 January 2026)

Rodgers, R. and Hammerstein II, O. (1959) *The Sound of Music*. [Script] New York: RKO Radio Pictures.

Wise, R. (dir.) (1965) The Sound of Music. [Film] Screenplay by E. Lehman. Los Angeles: 20th Century Fox.

Youth Opera (n.d.) Founding [Website] Available at: https://www.youthopera.co.uk/founding/ (Accessed 22 February 2026)

Youth Opera (n.d.) New Director Announcement [Website] Available at: https://www.youthopera.co.uk/announcements/new-director/ (Accessed 22 February 2026)

Youth Opera (n.d.) Musical Directors [Website] Available at: https://www.youthopera.co.uk/musical-directors-2/ (Accessed 22 February 2026)

Salzburg Wedding Company (n.d.) The Sound of Music [Website] Available at: https://salzburgweddingcompany.com/the-sound-of-music/ (Accessed 22 February 2026)

SalzburgerLand (n.d.) The Film Locations [Website] Available at: https://www.salzburgerland.com/en/the-film-locations/ (Accessed 22 February 2026)

Architectuul (n.d.) Otto Wagner [Website] Available at: https://architectuul.com/architect/otto-wagner (Accessed 22 February 2026)

Smithsonian Magazine (n.d.) The Gazebo from The Sound of Music in Salzburg, Austria [Image] Available at: https://photocontest.smithsonianmag.com/photocontest/detail/the-gazebo-from-the-sound-of-music-in-salzburg-austria/ (Accessed 22 February 2026)

CustomPac (n.d.) Polystyrene Cut to Size [Website] Available at: https://www.custompac.co.uk/polystyrene-cut-to-size (Accessed 22 February 2026)

English Lampposts (n.d.) Sunningdale Gazebo in Black [Website] Available at: https://www.englishlampposts.co.uk/sunningdale-gazebo-in-black.html (Accessed 22 February 2026)

Architecture History (n.d.) Austria [Website] Available at: https://architecture-history.org/schools/AUSTRIA.html (Accessed 22 February 2026)

Black Country Metal Works (n.d.) Bird Design Garden Gazebo [Website] Available at: https://www.blackcountrymetalworks.co.uk/bird-design-garden-gazebo.htm (Accessed 22 February 2026)

Bibliography

Just Artificial (n.d.) Flowering Trails Collection [Website] Available at: https://www.justartificial.co.uk/collections/flowering-trails (Accessed 22 February 2026)
Wickes (n.d.) Suburban Play Sand 20kg [Website] Available at: https://www.wickes.co.uk/Suburban-Play-Sand---20kg/p/285242 (Accessed 22 February 2026)
B&Q (n.d.) Tarmac Sand Pit Play Sand Large [Website] Available at: https://www.diy.com/departments/tarmac-sand-pit-play-sand-large/5030349012162_BQ.prd (Accessed 22 February 2026)
Ecclestons (n.d.) Polystyrene Block [Website] Available at: https://ecclestons.com/polystyrene-block/ (Accessed 22 February 2026)
Silk Flowers DecoFlora (n.d.) Artificial Silk Edelweiss [Website] Available at: https://silkflowersdecoflora.co.uk/artificial-silk-edelweiss (Accessed 22 February 2026)
Amazon (n.d.) Sandis Anti-Static Ostrich Feather Cleaning Duster [Website] Available at: https://www.amazon.co.uk/Sandis-Anti-Static-Ostrich-Feather-Cleaning/dp/B0868RTHVV (Accessed 22 February 2026)
Evergreen Direct (n.d.) Artificial Ivy Vine [Website] Available at: https://www.evergreendirect.co.uk/product/artificial-ivy-vine/ (Accessed 22 February 2026)
Bristol Paint (n.d.) Base Coat White 1000 [Website] Available at: https://www.bristolpaint.com/paints/p/base-coat-white-1000 (Accessed 22 February 2026)
Flints (n.d.) Bristol StandTex White 3kg [Website] Available at: https://www.flints.co.uk/product/All/BRI3WHITE (Accessed 22 February 2026)
The Holocaust Explained (n.d.) Anschluss [Website] Available at: https://www.theholocaustexplained.org/life-in-nazi-occupied-europe/foreign-policy-and-the-road-to-war/anschluss/ (Accessed 22 February 2026)
Design Museum (n.d.) Wes Anderson: The Archives [Website] Available at: https://designmuseum.org/exhibitions/wes-anderson-the-archives (Accessed 22 February 2026)
180 Studios (n.d.) The French Dispatch Exhibition [Website] Available at: https://www.180studios.com/exhibitions-and-performances/the-french-dispatch (Accessed 22 February 2026)
AbeBooks (n.d.) The Story of the Trapp Family Singers [Website] Available at: https://www.abebooks.co.uk/9780397000180/Story-Trapp-Family-Singers-Maria-0397000189/plp (Accessed 22 February 2026)
Encyclopaedia Britannica (2014) Order of Architecture [Website] Available at: https://www.britannica.com/technology/order-architecture (Accessed 26 January 2026)
Merriam-Webster Dictionary (2025) Capital styles for the five major orders of Classical architecture [Image] Available at: https://www.britannica.com/technology/order-architecture (Accessed 26 January 2026)
Graham Sweet Studios (2026) Screenshot of webpage: Polystyrene Cones [Image] Available at: https://shop.grahamsweet.com/shop/category/polystyrene-shapes-polystyrene-cones-62 (Accessed 26 January 2026)
Screwfix (2026) Melba Swintex Melba46 Traffic Cone Class 1 460mm [Website] Available at: https://www.screwfix.com/p/melba-swintex-melba46-traffic-cone-class-1-460mm/583KN (Accessed 26 January 2026)

Bibliography

Billboard (n.d.) Rodgers & Hammerstein: 5 Things to Know [Website] Available at: https://www.billboard.com/music/music-news/rodgers-hammerstein-5-things-to-know-8495416/ (Accessed 4 February 2026)

ABC Radio (n.d.) Anschluss [Website] Available at: https://www.abc.net.au/listen/programs/nightlife/anschluss/102086780 (Accessed 28 January 2026)

Central European Economic and Social History (n.d.) The Alps: Past Time of the Young Viennese in the 1920s–1930s [Website] Available at: http://centraleuropeaneconomicandsocialhistory.com/the-alps-past-time-of-the-young-viennese-in-the-1920s-1930s (Accessed 16 February 2026)

Truman Library (n.d.) Photograph 72-395 [Image] Available at: https://www.trumanlibrary.gov/photograph-records/72-395 (Accessed 22 January 2026)

Rodgers & Hammerstein (n.d.) The Sound of Music: 1959 Original Broadway Production [Website] Available at: https://rodgersandhammerstein.com/production/the-sound-of-music/1959-original-broadway/ (Accessed 11 February 2026)

Rodgers & Hammerstein (n.d.) The Sound of Music: 1961 West End Premiere [Website] Available at: https://rodgersandhammerstein.com/production/the-sound-of-music/1961-west-end-premiere/ (Accessed 3 February 2026)

Rodgers & Hammerstein (n.d.) The Sound of Music: 1965 Motion Picture [Website] Available at: https://rodgersandhammerstein.com/production/the-sound-of-music/1965-motion-picture-movie/ (Accessed 19 January 2026)

Rodgers & Hammerstein (n.d.) The Sound of Music: 1981 West End Revival [Website] Available at: https://rodgersandhammerstein.com/production/the-sound-of-music/1981-west-end-revival/ (Accessed 14 February 2026)

Castles and Manor Houses (n.d.) Photos Austria [Website] Available at: https://www.castlesandmanorhouses.com/photos-austria.htm (Accessed 30 January 2026)

Encyclopaedia Britannica (n.d.) Austria-Hungary [Website] Available at: https://www.britannica.com/summary/Austria-Hungary (Accessed 9 February 2026)

Encyclopaedia Britannica (n.d.) House of Habsburg [Website] Available at: https://www.britannica.com/summary/House-of-Habsburg (Accessed 1 February 2026)

Vienna Unwrapped (n.d.) Baroque Architecture in Vienna [Website] Available at: https://vienna-unwrapped.com/baroque-architecture-in-vienna/ (Accessed 17 February 2026)

Model Scenery Supplies (n.d.) Scatter Flock, Ground Cover, Trees and Bushes [Website] Available at: https://www.modelscenerysupplies.co.uk/scatter-flock-ground-cover-trees-and-bushes (Accessed 25 January 2026)

Holocaust Encyclopaedia (n.d.) The History of the Swastika [Website] Available at: https://encyclopedia.ushmm.org/content/en/article/history-of-the-swastika (Accessed 6 February 2026)

The Holocaust Explained (n.d.) Anschluss [Website] Available at: https://www.theholocaustexplained.org/life-in-nazi-occupied-europe/foreign-policy-and-the-road-to-war/anschluss/ (Accessed 3 February 2026)

Bibliography

Wikimedia Commons (n.d.) Hedera helix (Efeu) on northside at Haltgraben in Frankenfels [Image] Available at: https://commons.wikimedia.org/wiki/Category:Climbing_plants_in_Austria#/media/File:2017-07-28_(063)_Hedera_helix_(Efeu)_on_northside_at_Haltgraben_in_Frankenfels.jpg (Accessed 20 January 2026)

PictureThis AI (n.d.) Austria Region Plants [Website] Available at: https://www.picturethisai.com/region/Austria.html (Accessed 22 February 2026)

Rodgers & Hammerstein (n.d.) *25 rarely seen photos from The Sound of Music set*. Available at: https://rodgersandhammerstein.com/25-rarely-seen-photos-from-the-sound-of-music-set/ (Accessed: 4 January 2026).

Wikipedia (n.d.) *The Sound of Music*. Available at: https://en.wikipedia.org/wiki/The_Sound_of_Music (Accessed: 6 January 2026).

YouTube (n.d.) *The Sound of Music* [Video]. Available at: https://www.youtube.com/watch?v=C1FrTAXlcfk&t=21s (Accessed: 8 January 2026).

Smithsonian Magazine (n.d.) *The gazebo from The Sound of Music in Salzburg, Austria*. Available at: https://photocontest.smithsonianmag.com/photocontest/detail/the-gazebo-from-the-sound-of-music-in-salzburg-austria/ (Accessed: 10 January 2026).

Permanent Tourist (2021) *The sight of The Sound of Music*. Available at: https://permanenttourist.ch/2021/04/the-sight-of-the-sound-of-music/ (Accessed: 12 January 2026).

Amish Gazebos (n.d.) *The Sound of Music gazebo*. Available at: https://www.amishgazebos.com/the-sound-of-music-gazebo/ (Accessed: 15 January 2026).

SalzburgerLand (n.d.) *The film The Sound of Music*. Available at: https://www.salzburgerland.com/en/the-film- (Accessed: 18 January 2026).

Bristol Paint (n.d.) *Plum 1039*. Available at: https://www.bristolpaint.com/paints/p/plum-1039slocations/ (Accessed: 22 January 2026).

Salzburg Wedding Company (n.d.) *The Sound of Music*. Available at: https://salzburgweddingcompany.com/the-sound-of-music/ (Accessed: 25 January 2026).

Flints Theatrical Chandlers (n.d.) *Flame retarding additives for paints*. Available at: https://www.flints.co.uk/products/flame-retarding-additives-for- (Accessed: 29 January 2026).

Bristol (n.d.) *Copper 905 glitter paint*. Available at: https://www.bristolpaint.com/paints/p/copper-905-glitter-paint (Accessed: 2 February 2026).

Bristol (n.d.) *Base coat white 1000*. Available at: https://www.bristolpaint.com/paints/p/base-coat-white-1000 (Accessed: 8 February 2026).

Bristol (n.d.) *Earth palette*. Available at: https://www.bristolpaint.com/palette/earth (Accessed: 14 February 2026).

Bristol (n.d.) *Primer palette*. Available at: https://www.bristolpaint.com/palette/primer (Accessed: 20 February 2026).

Architecture History (n.d.) Austria [Website] Available at: https://architecture-history.org/schools/AUSTRIA.html (Accessed 14 February 2026)

Smithsonian Magazine (n.d.) The Gazebo from The Sound of Music in Salzburg, Austria [Image] Available at: https://photocontest.smithsonianmag.com/photocontest/detail/the-gazebo-from-the-sound-of-music-in-salzburg-austria/ (Accessed 27 January 2026)

Bibliography

Wikimedia Commons (n.d.) Hedera helix (Efeu) on northside at Haltgraben in Frankenfels [Image] Available at: https://commons.wikimedia.org/wiki/Category:Climbing_plants_in_Austria#/media/File:2017-07-28_(063)_Hedera_helix_(Efeu)_on_northside_at_Haltgraben_in_Frankenfels.jpg (Accessed 22 February 2026)

PictureThis AI (n.d.) Austria Region Plants [Website] Available at: https://www.picturethisai.com/region/Austria.html (Accessed 22 February 2026)

Flints (n.d.) Sands Search Results [Website] Available at: https://www.flints.co.uk/searchResults.html?search=Sands (Accessed 22 February 2026)

Bristol (n.d.) Earth Palette [Website] Available at: https://www.bristolpaint.com/palette/earth (Accessed 22 February 2026)