

Active House Reflection Essay

Word count: 1100

Introduction

This essay will discuss the Active house project that my group completed; the steps and processes that we did to create a strong proposal, the meetings and jobs that we conducted and an analysis of the project as a whole. The project evolved around the principles of energy conservation and efficient use of resources, in which we were tasked to design what we thought an active house for 2030 may work.

Week 1

On the 29th January 2020 was the first meeting within our group. We discussed some initial ideas and research options such as renewables, the idea of garden roofs and types of services. In addition to this, we assigned roles and tasks to each member in which I was given the role as leader.

I then gave tasks to all members based on the ideas we first put forward and looked at the active house guide for some guidance and inspiration for the next meeting. I made a list of things that could be included in a 2030 active home.

The first week was not very organised and took a while to get everything on track and efficient due to a lack of management of the project.

However, despite this, we did complete the majority of tasks that we set out to doing by the second meeting and made sufficient progress to build on going forward, with good ideas and research.

Week 2

The second week, we had a meeting on the 6th of February in which we discussed what each member would focus on in order to drive the project forward. We also setup a PowerPoint for all members to add their research and ideas to as we go through the meetings.

I collated all the information and ideas we had in order to determine what was viable and could be worked on as part of the project. We then went our separate ways to achieve our given tasks by the next meeting, in which I looked at Biomimicry and Conservation.

I believe that this week was well planned and organised in comparison to last week. We all had our own tasks to do, in which branched out to all the areas we wanted to look at so that we could build up a proposal later on.

In addition, the use of the Google drive PowerPoint system helped us concentrate all of our information in one organised place so that every member could use and/or add to the pool.



Figure 1 – Active House Mood Board (Author, 2020)

UNIVERSAL ACCESSIBILITY

- Access is defined as an approach, entry or exit.
- Entrance door minimum clear opening width of 775mm
- Corridors, passageways and internal door minimum of 750mm
- Stair minimum clear width of 900mm, with provisions of handrails on both sides
- Special provisions for handrails are necessary for those who may have difficulty in negotiating changes in level.
- Main access and internal fire doors that self-close should have a minimum operating force of 20 Newtons at the leading edge. If this is not possible, a power operating door opening and closing system is required.
- Building regs part M1, the reasonable provision shall be made for people to gain access to the building. Approved document M section D, people regardless of disability age or gender should be able to gain access to buildings.



Figure 2 – Universal Accessibility Research (Olivia [Member], 2020)

Week 3

By the third week, we had all completed our assigned tasks and planned a meeting on the 12th of February to discuss our next steps. In this meeting, we started to look at more technical details and using the research we had to start designing our Active House of 2030.

We discussed the requirements of the house in addition to details such as accessibility, placement of spaces and reuse of water and rain water. This then enabled us to start the design stage of the process in which I looked at what could influence the volumes and shapes we produce in the design.

We had made good progress this week; all members knowing what parts they are involved in, how we plan to move forward and armed with our first two weeks of researching and idea generations.

I think that we had started to build up a good proposal foundation by the end of this week, in which would aid us in continuing the project in a well-managed manner.



Figure 4 – Initial CAD Concept Model (Author, 2020)



Figure 3 – Courtyard Pod CAD Idea (Viktoria [Member], 2020)



Figure 5 – Courtyard Pod Side View (Viktoria [Member], 2020)

Week 4

In the fourth week, we met on the 20th of February to discuss our progress. We looked at my current designs and brought some ideas to build upon it which helped us improve the proposal. For example, the use of a lift and ramp for better access.

In addition, we also started to restructure our presentation so that we can use it more effectively and so that we can show it at the next lesson.

This week was slow due to some members being absent and so some tasks were not completed. This did set us back a bit as then we needed to reorganise and discuss who we plan to go forward.

However, there was sufficient progress made on the design of our active house, with a CAD model and some sketches produced.

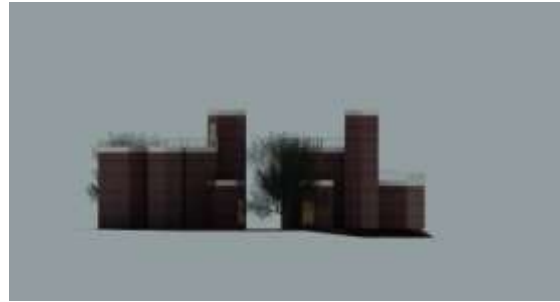


Figure 7 - South View 3D Model (Author, 2020)

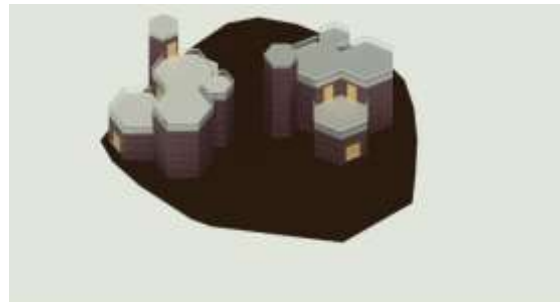


Figure 6 - Sky View 3D Model (Author, 2020)

Week 5

By the fifth week, we were in a position to start producing a document that presents our proposed active house. We had developed a final design with drawings and a 3D CAD model, along with what layouts, materials and ideas implemented.

In addition to this, I had made a meeting on the 24th February to start finalising and finishing our project ready for the last week. Giving some final tasks to members such as parts of the document to complete.

We were in a good position for the presentation next week with an almost complete project at hand. We had completed all of the necessary research and findings ready for the proposal along with a complete design concept.

Also, I think that our proposed design turned out great; using modular hexagon pods that can be stacked, customised and with integrated monitoring and technology in order to maximize efficient use of electricity and water.

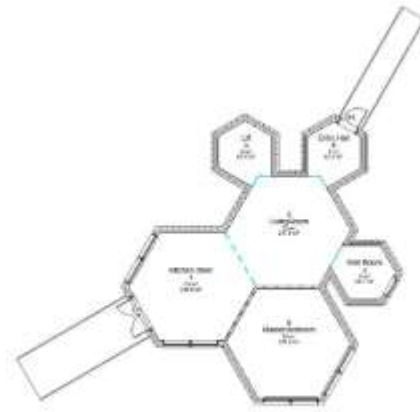


Figure 8 – Active House Ground Floor Plan (Author, 2020)

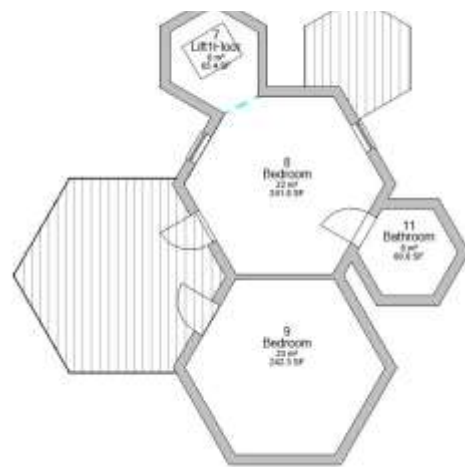


Figure 9 – Active House First Floor Plan (Author, 2020)



Figure 10 – Active House Sectional Elevation (Author, 2020)

Week 6

In the final week, we had submitted our proposal and was ready for the presentation on the Thursday. We had our last meeting on the 28th of February in which we reviewed our proposal document and made amends based on feedback from the previous lesson.

During the presentations, we had the opportunity to both explain our proposal to the class and learn from other proposed concepts.

From this, I learnt a range of potential routes that I could take in order to improve our proposal further; such as making a suitable logo design in addition to our proposal name of 'Poly-Pods', exploring deeper into implementing a larger range of on-site renewables and showing our modular construction more clearly by presenting a range of different configurations.

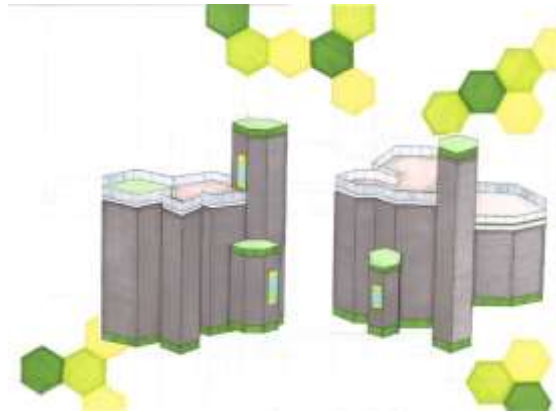


Figure 11 – Drawing of Poly-Pods Concept (Clare [Member], 2020)

Conclusion

From this project, I have developed a better understanding of what an Active House means and the challenges and criteria that is assigned to it. The project has helped me explore what potential influences that the Active House philosophy could play on the design and function of buildings along with its role going forward.

If I was to complete a similar project in the future and was given the same roles, I would use the earlier stages of the project to explore and implement more elements of Active House into my designing and time more effectively in order to achieve this.

Overall, the project was a success and a great experience.