

Design Report

Overview

My design aims to create a fun, engaging website that includes a virtual copy of the Barley Hall attraction, in which users can explore the rooms and click on objects to learn more about them. This learning approach mimics the experience curated for guests of the attraction and places the volunteers in a position to experience the attraction like a guest would to support their understanding of how best to enjoy Barley Hall. I compared the existing training resources and decided to focus on high levels of interaction, prompting the user to navigate through the virtual room in order to learn the necessary facts for their role. User research directed a strong preference for automated progress checks and immediate feedback to responses, which resulted in a journal feature that responds to user activity and a Q&A window that draws intel from a closed data set for immediate responses relevant to the experience. This was demonstrated in a Wizard of Oz style prototype.

Design Approach

After reviewing both current training options, I created a table to record the positive and negative aspects of each resource.

Desk research

Training Resource	Positives	Negatives
Training Pack	<ul style="list-style-type: none">- Contains all information needed for volunteers to complete their role successfully- Information is broken down by room and theme- Information is colour coded- Information is broken into chunks that are easy to read- Format is accessible- Volunteers can access in their own time	<ul style="list-style-type: none">- Long booklet- Limited interactivity- No way to test knowledge- Provides minimal visual learning support- Doesn't cater to multiple learning approaches
Training Videos and presentation slides	<ul style="list-style-type: none">- Consistent theme in visual display of information- Limited condensed slides and more audio explanation (audio accessible approach to learning)- Breaks down information well- Prerecorded for volunteers to access whenever	<ul style="list-style-type: none">- Very long videos (about 25 minutes roughly per video)- Not interactive

Figure 1 Desk research table

Both followed a rigid structure and contained all the necessary information for the volunteers. The York Archaeology Barley Hall pdf room guide (n.d.) visually broke down information into colour coded windows and tabs, making the volume of information easier to navigate when finding specific information. This indicated they both lack a higher level of interaction from participants and are passive in their learning approach. The limited interactivity could lose the engagement and focus of the user.

I considered a list of features in response to the desk research considering how they would tackle problems highlighted in the current resources, such as the limited interactivity and lack of engagement.

- A virtual log book that automatically records progress
- A virtual diary where users can manually log their own progress
- A visual representation of the volunteering environment (e.g. an image, video, 3D representation)
- A set of flashcards to test your learning

Figure 2 Potential features

I used this list, paired with current training methods and created a questionnaire that asked 8 participants of their learning preferences. Participants were asked which features they would find most and least helpful in self-guided learning. Users showed a strong preference against the pdf format. This reaffirmed my design decision to move away from this style of learning and focus on a concept that requires a higher level of interactivity.

Which of the following resources would you find least helpful for your self guided learning?
8 responses

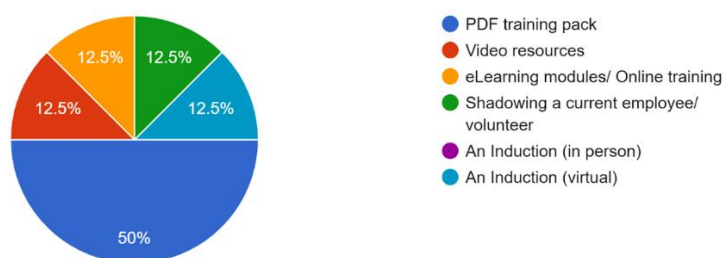


Figure 3 Questionnaire response

Participants did not find the concept of a virtual diary that requires manually logging progress as something beneficial to their self-guided learning and instead voted for a logbook that automatically records their progress.

With a virtual learning resource, which of the following features would you be least likely to engage with?
8 responses

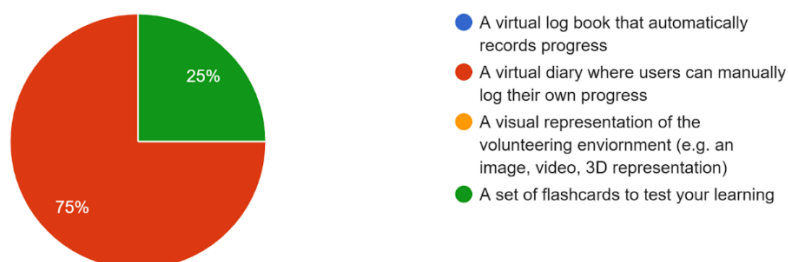


Figure 4 Questionnaire response

With a virtual learning resource, which of the following features would you be most likely to engage with?

8 responses



Figure 5 Questionnaire response

The clear preference for automation of these tasks helped my decisions in designing how the journal-like feature would function in the website. The journal would gather information when the user has clicked on an object in the room; the information could then be found displayed in the journal. As this was a key point of user interest in regards to approaching self-guided learning, this is a feature that I prioritized in the development of the prototype. It would be largely responsible for the gathering and redisplaying progress and data for users, making it a clear first point of discovery when users feel it is appropriate to review their learning progress.

The participants indicated that they want to see a preview of the spaces they will be volunteering in, whether it be a 3D representation or image or video. This feature made the skeleton of the project concept, creating a virtual environment in which users can gather facts and review them in the journal.

With a virtual learning resource, which of the following features would you like to see?

8 responses

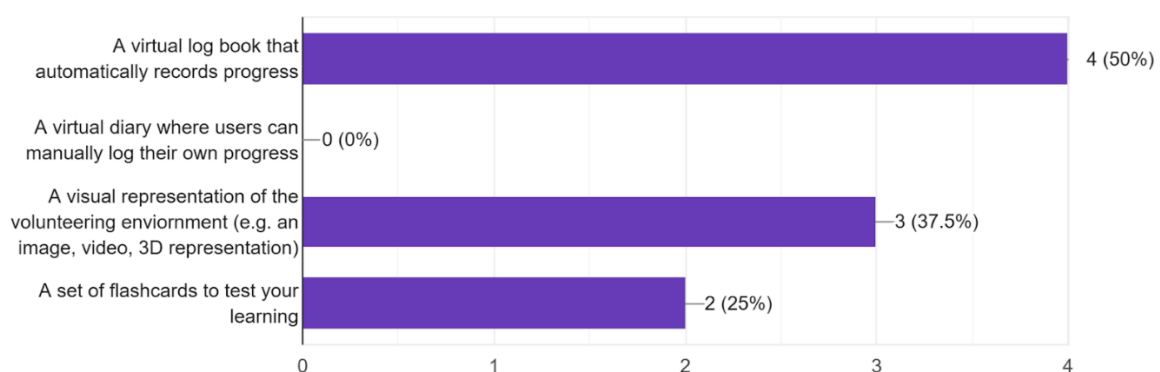


Figure 6 Questionnaire response

From the data gathered, I created a primary persona, deciding her age based on the age range for volunteers and her interests, career and education on the historic setting of Barley Hall.

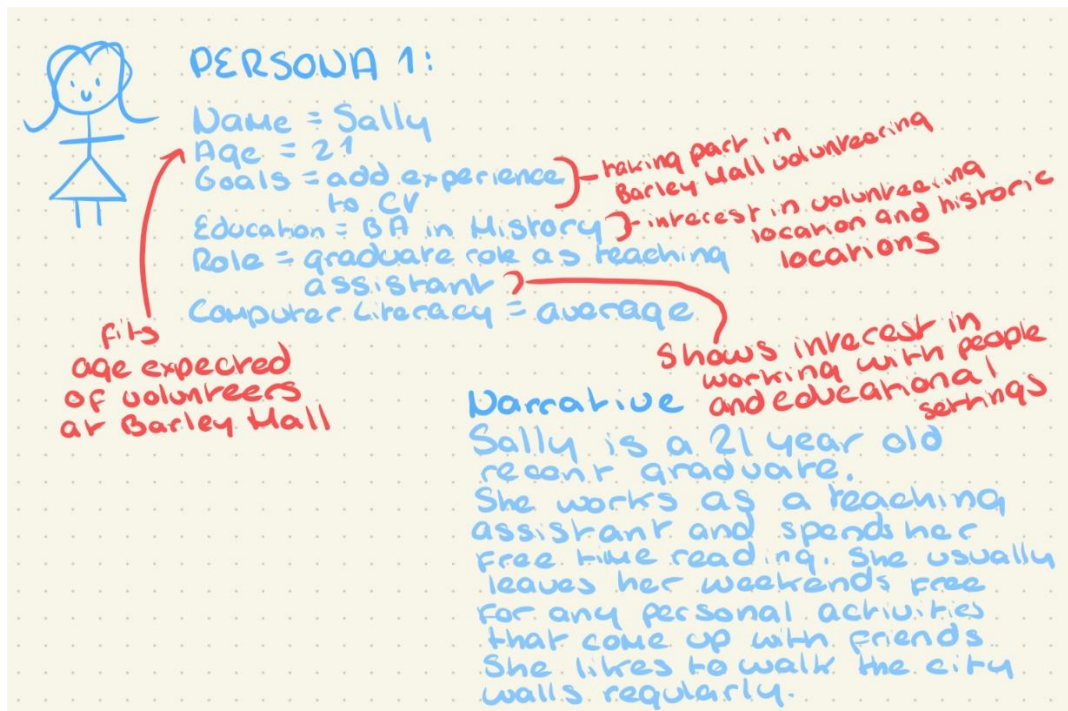


Figure 7 Drawing of persona

My persona's goal matches an objective that can be achieved through the act of volunteering. I then created a user journey using my persona to explore typical interactions with the product.

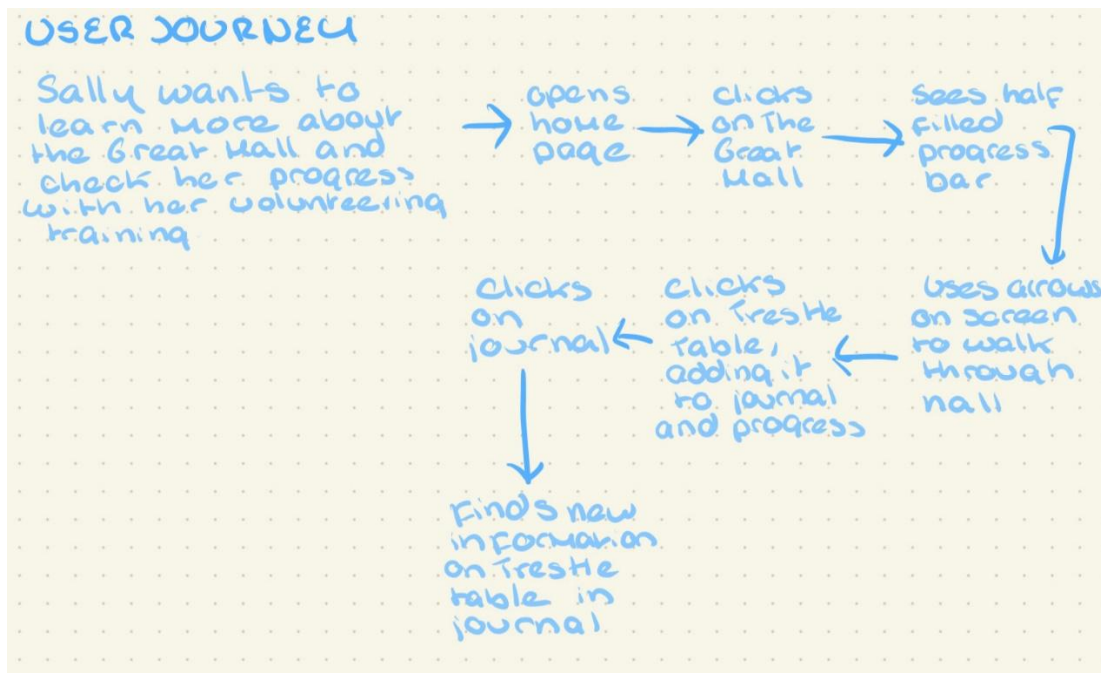


Figure 8 User journey

Design Statement

My design aims to create a fun, engaging website with a strong visual focus which displays a virtual rendition of the Barley Hall's Great Hall attraction that users can navigate with on screen arrow icons and click on different objects to learn more about them, before revising this information in the journal. The focus on learning by doing aims to replicate the experience presented to Barley Hall guests with

discovery and personal exploration of the Hall being encouraged, breaking down large groups of information into smaller, bite size chunks and spread across the room view.

Requirements

My functional requirements include a way to track which objects the user has clicked on and display this information in the journal. To meet this requirement, I intend to add a progress bar at the bottom left of the room view so progress is clear to users. The journal functionality is also designed to meet this requirement by displaying content gathered in the order it was discovered by the user, personalising the experience for each user and directly responding to the questionnaire data, in which user preference for automated collection and tracking of activity was identified. The use of clear navigation is a functional requirement I aim to meet by using clearly defined icons in the bottom centre of the screen so users can locate their method of moving around the virtual space, assisted by the large circular icons on the floor space in the rooms which not only show the users where they can navigate to but are also placed in locations in which users may be when volunteering. Another functional requirement of this project is that the room names on the map must navigate to the intended locations and load the player in the centre point of the chosen room for consistency and avoid confusing users when they swap to different locations. The introduction of the floor icons for different places users can navigate to in the room space will support in meeting this requirement.

Design Context

I took inspiration from Google Earth (2001) when considering my interaction methods, deciding to replicate the functionality of holding left click and dragging to change the current perspective. I gathered images and videos of The Great Hall to be used in the creation of my Wizard of Oz prototype to demonstrate this level of interactivity.



Figure 9 Google Maps screenshot

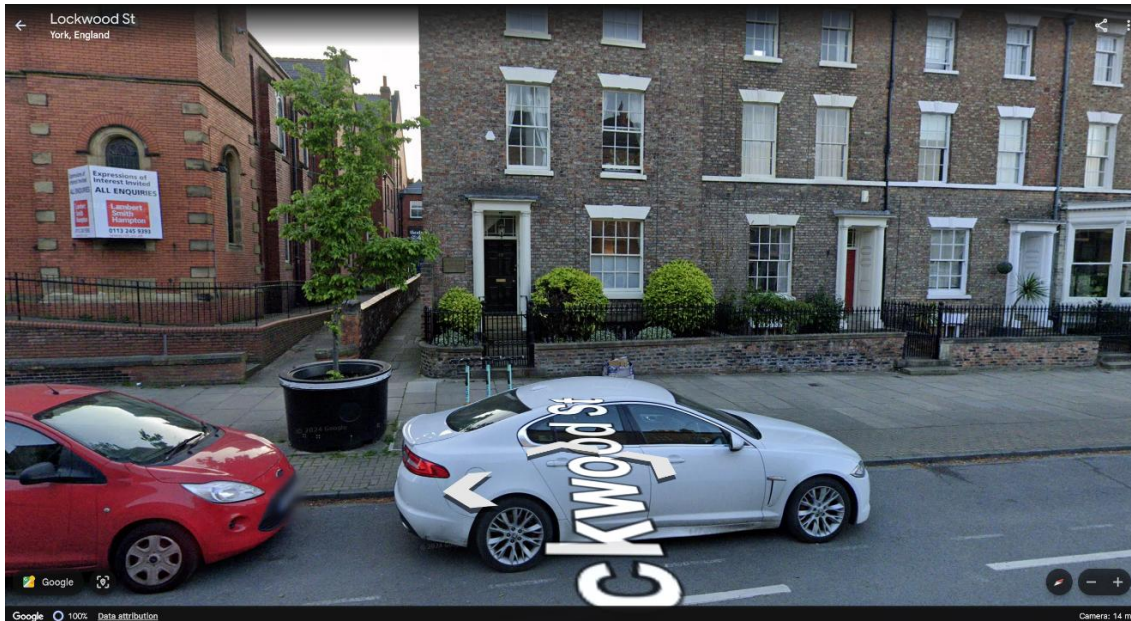


Figure 10 Google Maps screenshot

I also took inspiration from the University of York Matterport (2011) 3D view of accommodation rooms. I wanted to replicate the icons on the floor that make it clear to the user where they will be standing if they chose to click in that direction. This level of clarity makes the space less intimidating and clearer to navigate by removing options from the user. This would complement the idea of users clicking on virtual objects in the room view space because users are placed directly in front of the objects they need to click on to gather all the necessary information whilst still having the illusion of choice and self-guided discovery.



Figure 11 annotated Matterport screenshot



Figure 12 annotated Matterport screenshot

Don't Nod Entertainment (2015) *Life is Strange* inspired the journal feature in the project. The game features Max's journal, an in-game diary that changes and logs progress based on the choices the user makes when deciding how to advance through the story's multiple options. In a similar way, I wanted the journal in my project to change depending on what information the user has gathered from the room space, personalising the journal to the user's own interaction and discovery in the 3D setting.

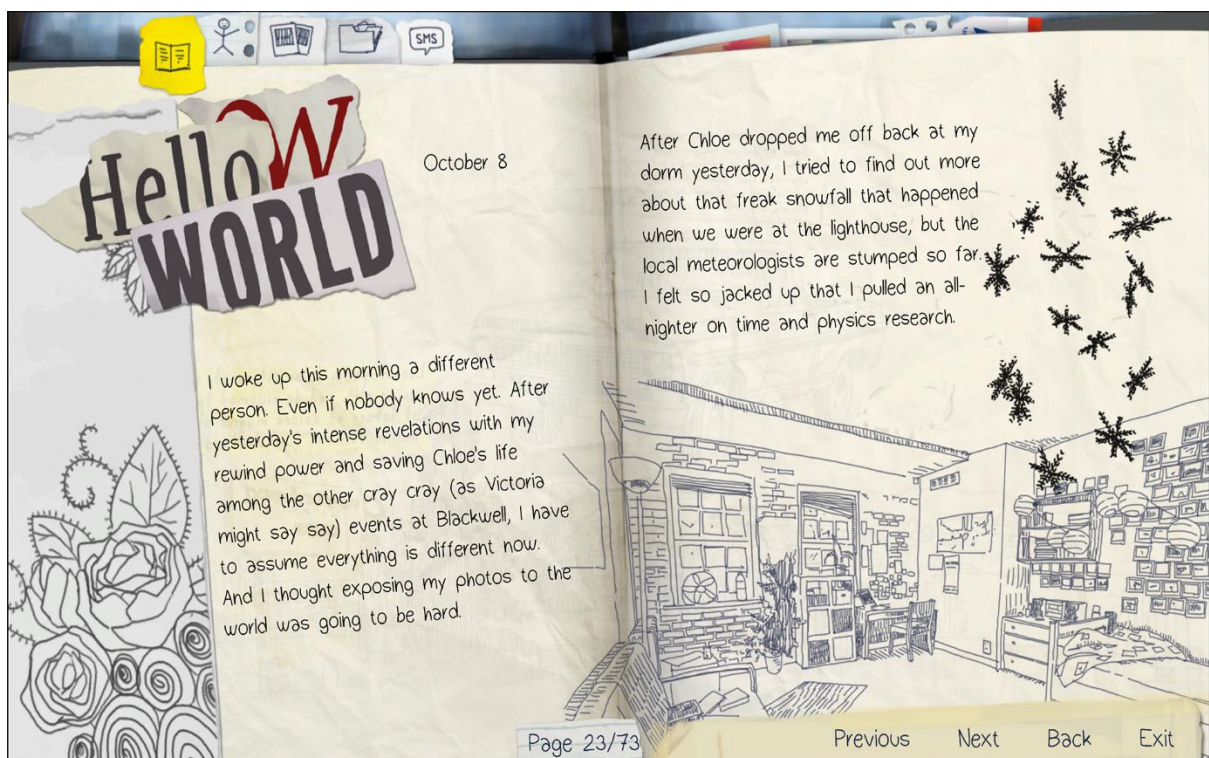


Figure 13 Max's Journal (https://life-is-strange.fandom.com/wiki/Max%27s_Diary)

When approaching the strong visual aspects of the project, I followed the use of colours consistently used in the branding of the Barely Hall website (n.d.). I took screenshots of different pages and compared them to the information displays in the York Archaeology Barley Hall pdf room guide (n.d.). I took note of the red colours typically used to display headings or titles when breaking apart the information on screen.

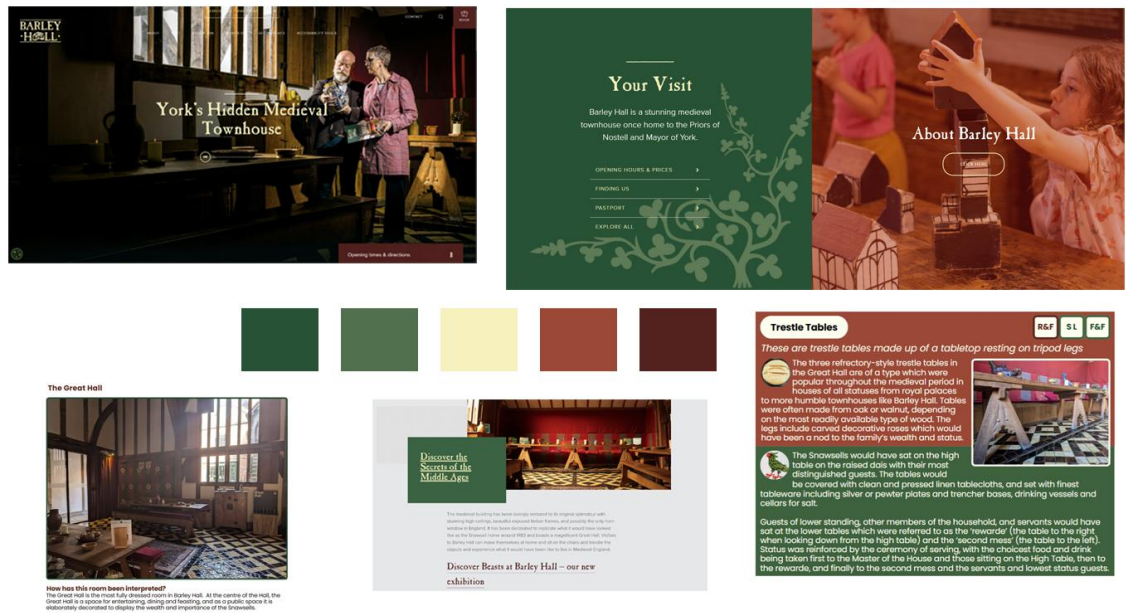


Figure 14 Barley Hall mood board

The dark and light warm green tones also used were often when display separated key information without a large text display and was typically accompanied by different icons. I used this when reapproaching the design for the journal. In my first design of the journal when deciding the colours, I used different shapes of blue to create a calming learning atmosphere. This worked well but it didn't fit the theme of Barley Hall.

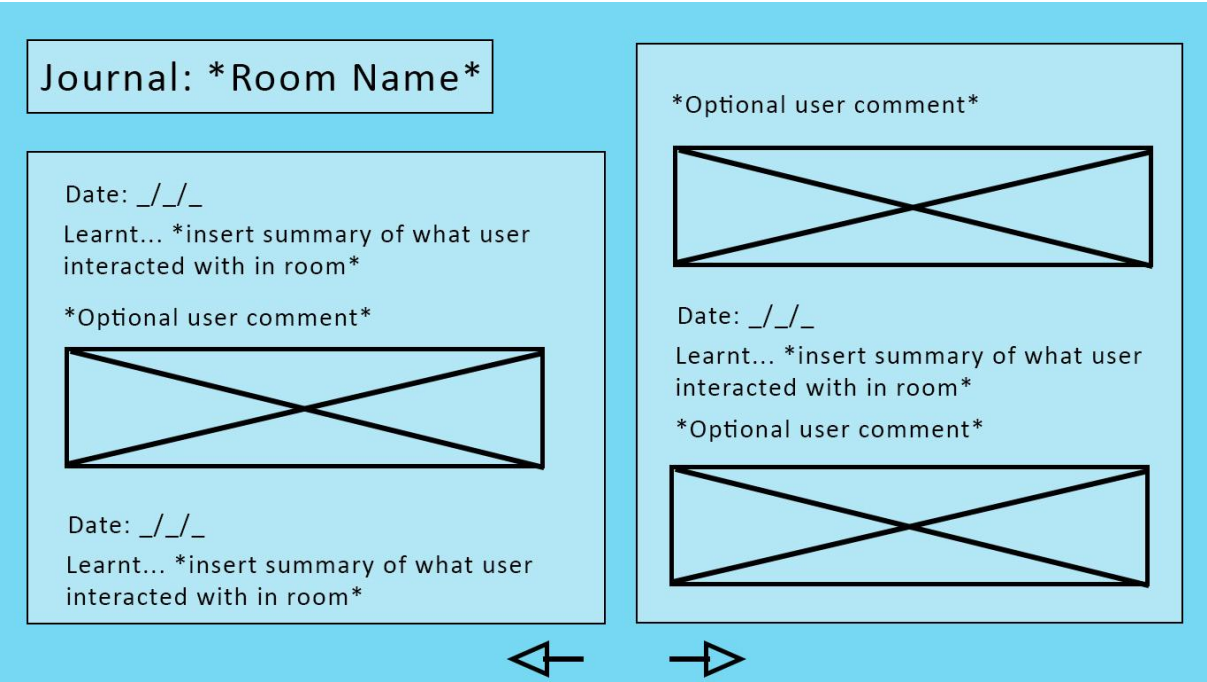


Figure 15 Early journal design

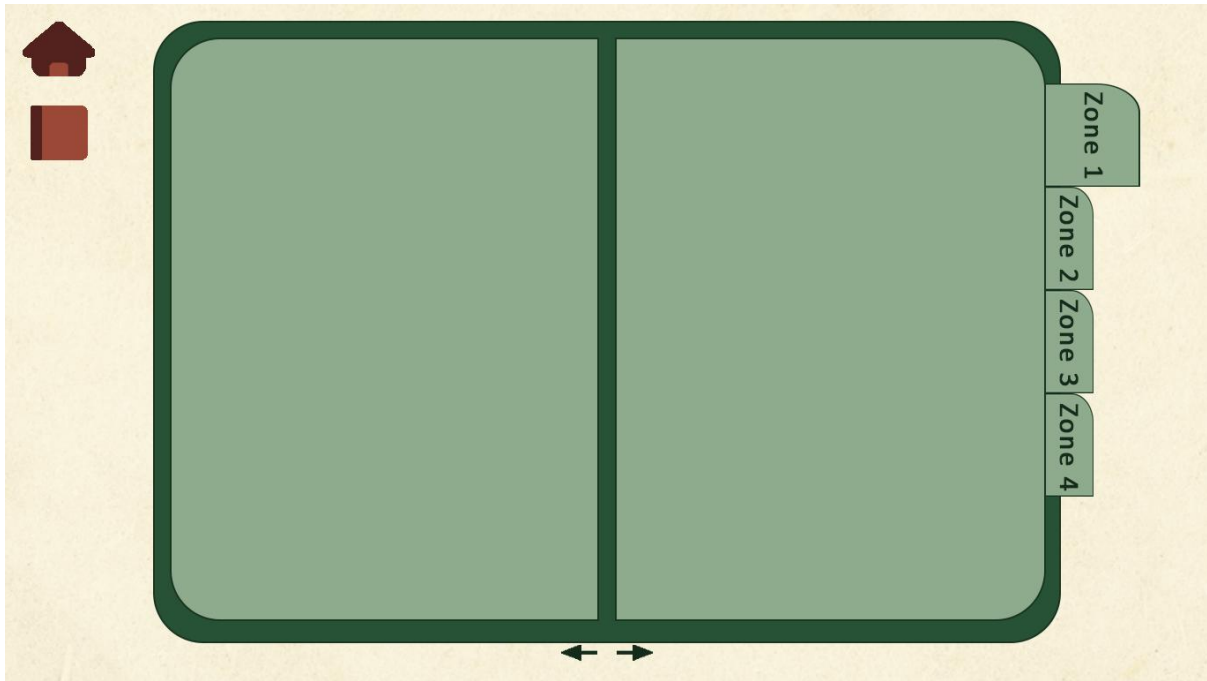
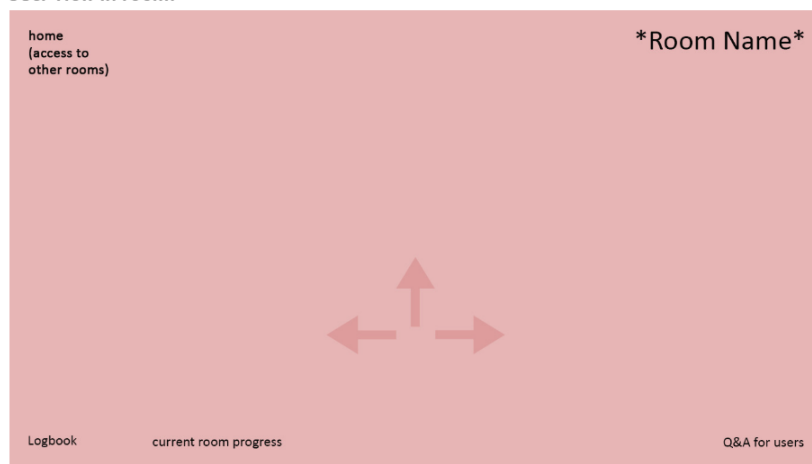


Figure 16 Final journal design

Development Process and Evolution

I decided the most effective ways to display information with wireframe drawings of each page, to first check I was including the necessary features to fit the requirements. I adapted this into slightly more well designed pages, still focusing on the clarity of how to find the features I planned on implementing. After I had created the first set of designs, it was clear the edits that I needed to make so I annotated each page with improvements. I followed the rule of thirds grid to organise information, keeping navigation icons in the top left corner of the screen throughout.

User view in room:



Thinking to use this layout:

- Room being explored always clear by title in top right corner
- Home button where users can return to map of barley hall
- Log book in bottom corner for them to access their progress
- The current room progress will work like an xp bar that increases with every new piece of information that is collected and then stored by the log book
- Q&A live chat bot to answer any questions the user has, drawing from closed data set that only stores info relevant to volunteers
- Arrows to navigate through the room

Figure 17 Initial room view design and notes

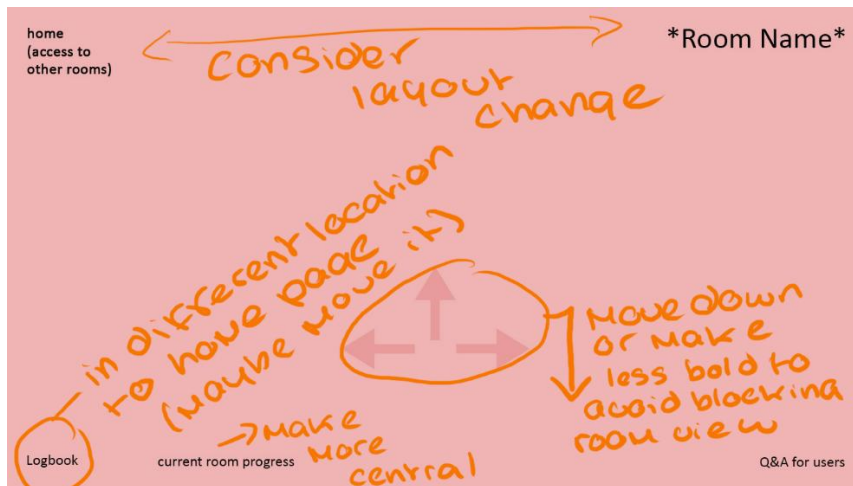


Figure 18 improvements annotated on design

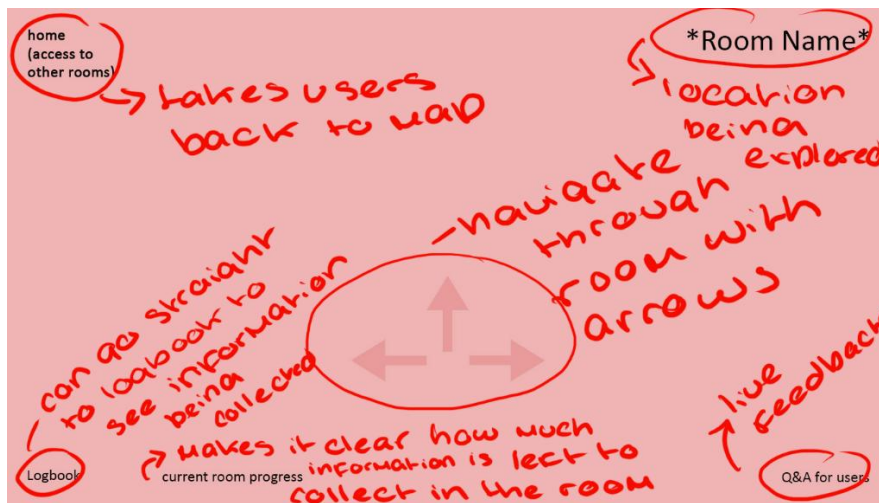


Figure 19 annotated intended functionality

Home page



The home page is a map of barley hall because it aims to:

- Familiarize volunteers with layout of building and help them get to know the hall
- Users can easily click on the room names to navigate directly to that room
 - This is useful because volunteers focus on one room usually and they can navigate directly to the appropriate information

Figure 20 initial home page design



Figure 21 improvements annotated on design

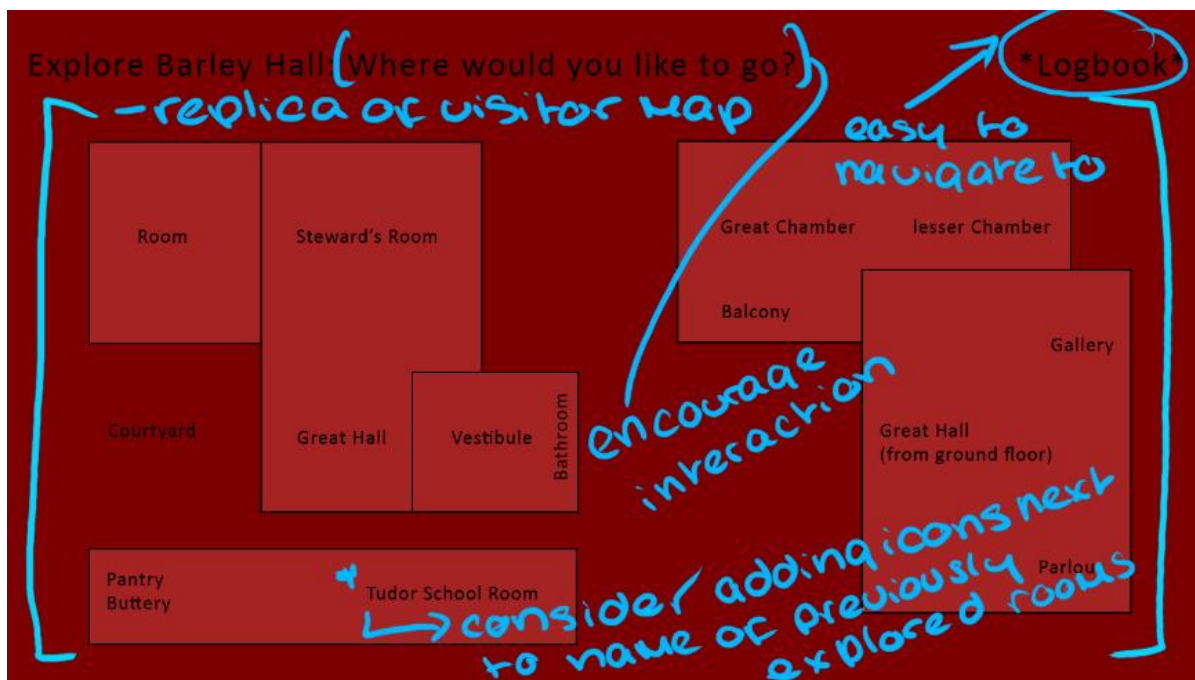


Figure 22 annotated intended functionality

The first draft of the journal had a full page display approach which lost the journal concept and became more of a digital log, when I wanted to achieve a more diary-like feel.

User journal

- Has images of items in room for user to identify what they interacted with
- Has the date they chose to interact with this

- Has the summary of the information they found out so they can look back and review their progress
- **REMOVE OPTIONAL COMMENT**
- Arrow keys at the bottom for user to click and navigate different pages in the journal
 - Need to add page numbers so user knows what page they are on out of how many
 - Maybe add an easier way to navigate pages like a file system that has room names which can appear at the top

Figure 23 initial journal design

I decided to display the information in a literal onscreen book that covers most of the page display so users feel like they're flicking through the pages, rather than viewing progress in boxes on screen. This kept the journal display and additional icons to navigate completely separated.

Figure 24 journal improvements

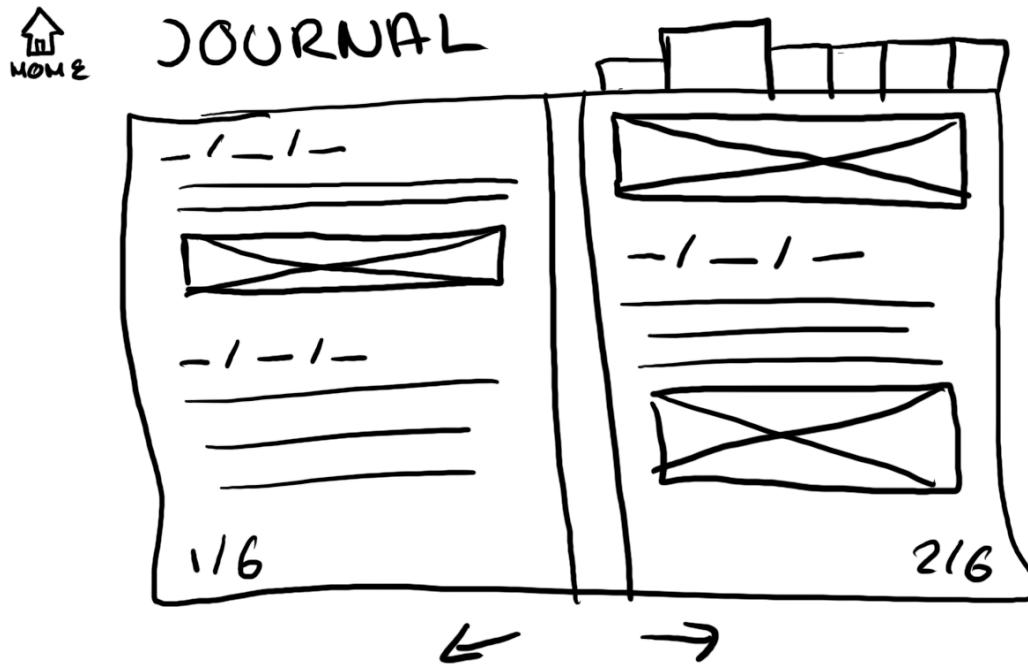


Figure 25 sketch of journal re-design

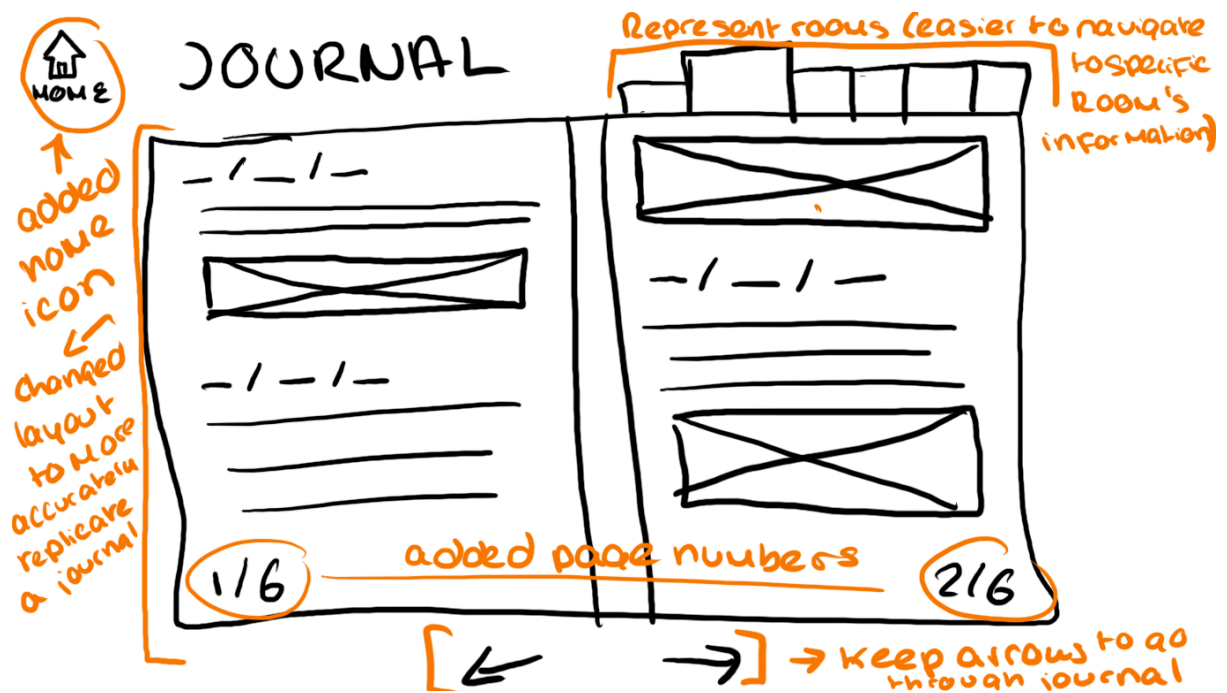


Figure 26 annotated sketch of re-design

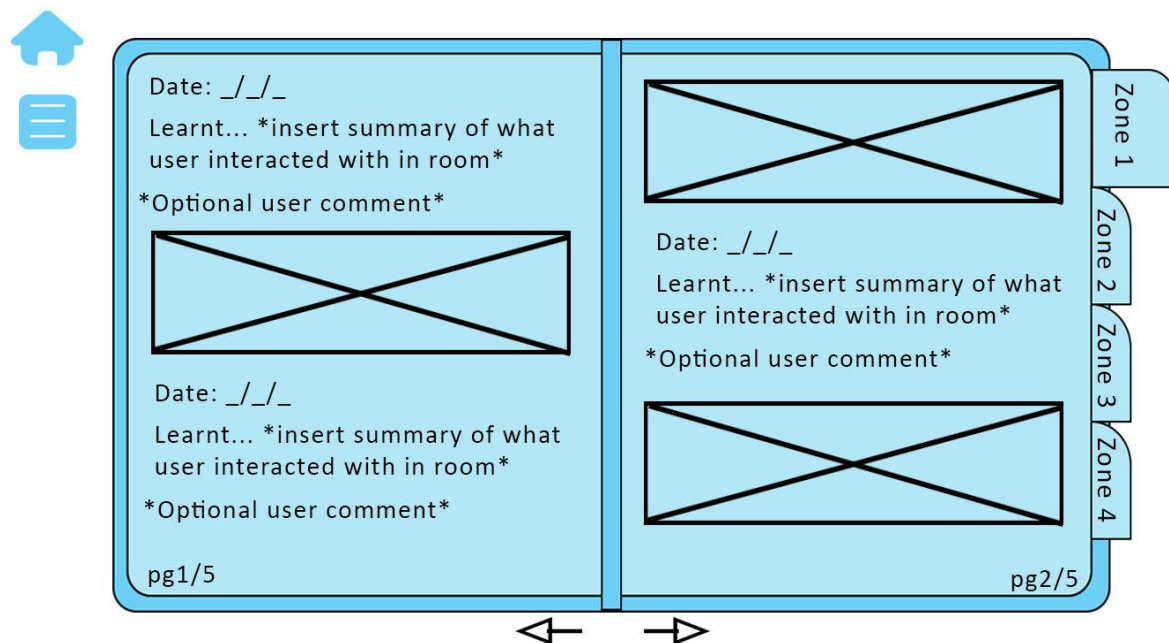


Figure 27 improved journal page

I designed the Q&A feature in response to the questionnaire data. Participants expressed their interest in a way to ask questions and get quick responses. For this feature to function, it would have to gather responses to questions from a closed set of data that only includes any relevant information that directly relates to the Barley Hall volunteering experience, which could be deduced from the current available training resources. The closed data set would eliminate the possibility of users receiving inaccurate information or information that is not directly relevant and could potentially confuse participants by contradicting the information predetermined within the webpage. To visually represent the Q&A feature, I designed a small icon in photoshop in the shape of a speech bubble to convey that this feature opens conversation for participants to gather direct information. I also added a question mark in the centre to clarify the icon's purpose in answering any questions that come up.



Figure 28 Q&A icon

I kept the blue colouring I had originally used on the home and journal icons, even when I changed the final colour choices to be more in line with the Barley Hall branding. This is because I wanted the Q&A to stand out as a separate feature compared to the other features within the website. The home page and journal page are both closely linked by their navigation and connection between visual displays of information that serve the purpose of guiding and informing the user of key details specifically outlined in the other Barley Hall training resources. This feature, however, operates differently and I have tried to implement it as a quick and easy to access support during the user's discovery in a subtle way that doesn't overwhelm the user or make them feel distracted from their personal exploration of the virtual space.



Figure 29 first icon designs



Figure 30 final icon designs

I used calibri as it is a simple font that provides clarity and readability when placed among the various icons on the display. As the display on all pages already contained a lot of visual information, particularly the Great Hall room view with the footage of the experience, I felt that using a more intricate font could overwhelm the user and valuable information could get lost, negatively impacting the user's experience.

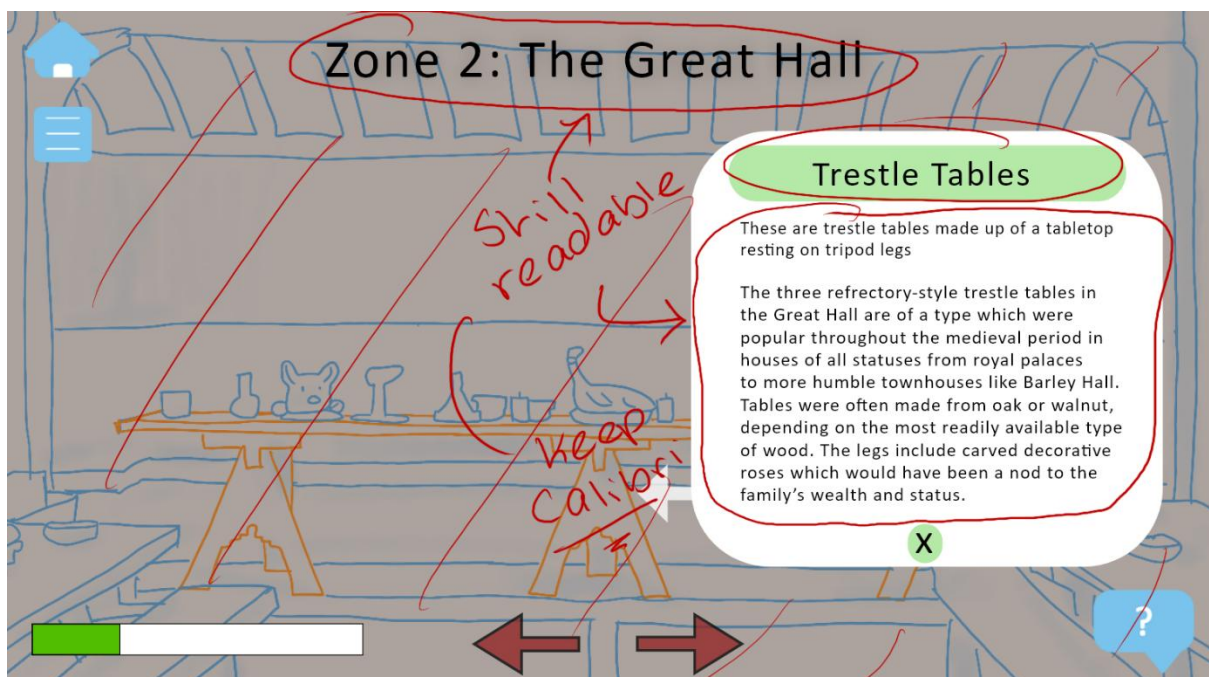


Figure 31 use of calibri in XD prototype page

I used the simplified page designs and constructed a prototype using Adobe XD. I used my user journey to create an example interaction a user might have while using the product. I broke down this interaction into a list of tasks and gave this to users alongside the UX prototype and then used the system usability scale following the template questions (Thomas, n.d.), placing example questions in a google form and asking users to document their experience. I discovered from my user testing that users were comfortable interpreting the functionality and could navigate the system without further assistance from a technical person. This affirmed that I effectively implemented visual features that adhere to the functional requirements to efficiently navigate the website. Once I was confident in these features, I storyboarded these same set of tasks to begin creating my Wizard of Oz final prototype to further demonstrate the functionality that was limited by the constraints of an UD

prototype. Although the user testing results showed a successful prototype, it lacked features such as 'holding left click and drag to move camera' functionality and also used drawings of the hall in place of final images. This could result in possible colour changes for clarity.

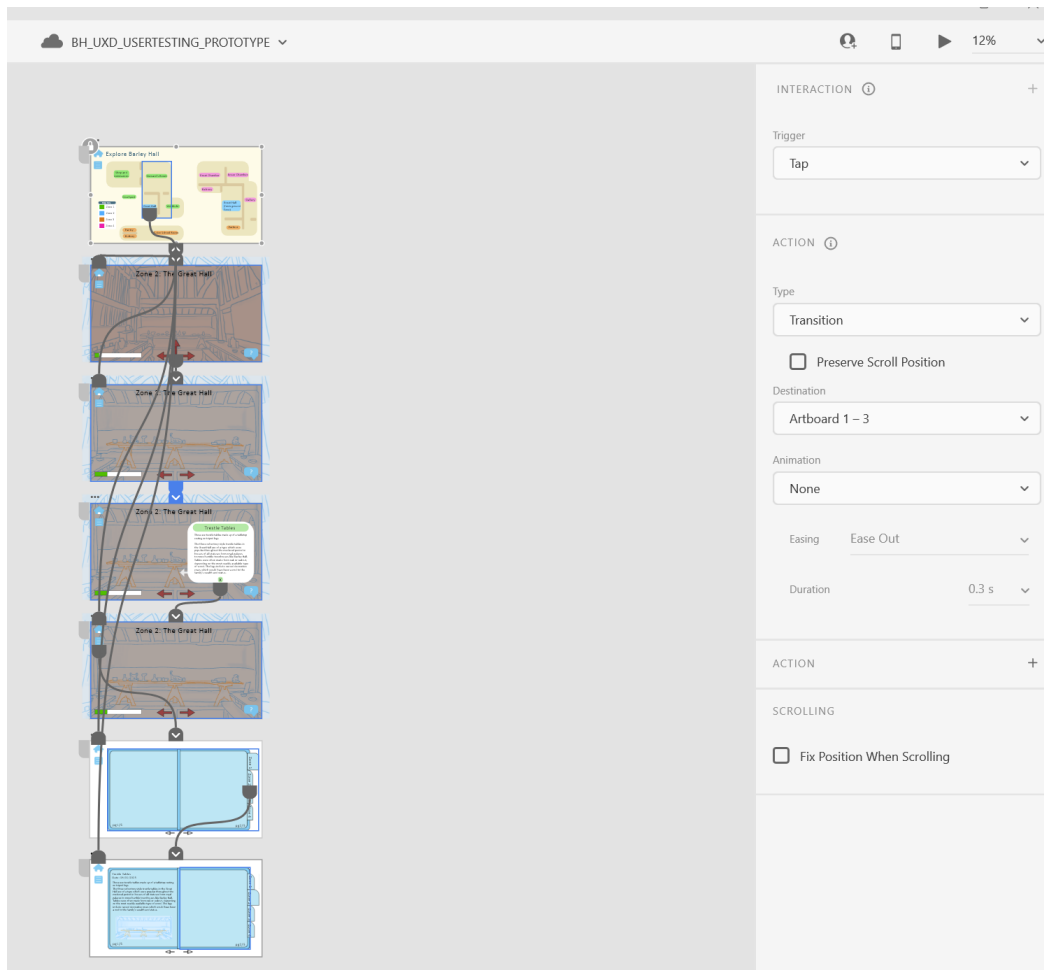


Figure 32 prototype in Adobe XD

This is my final Wizard of Oz prototype.

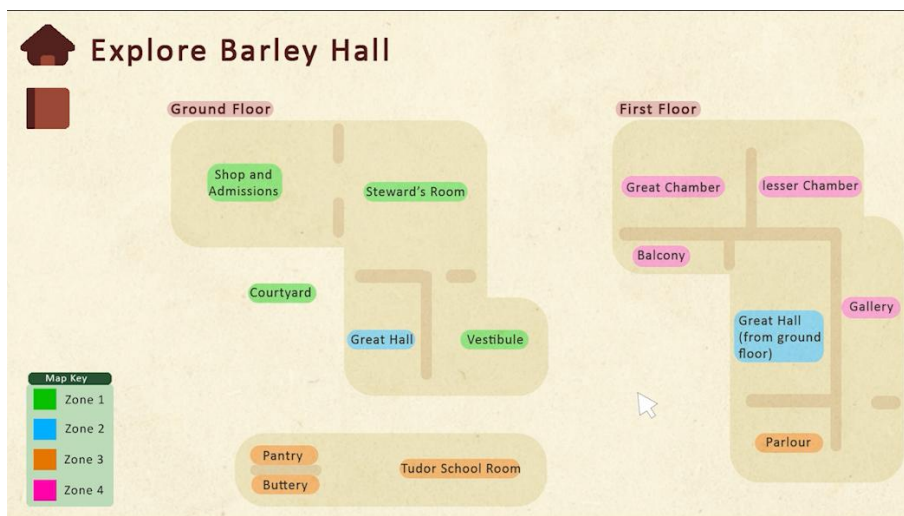


Figure 33 final prototype

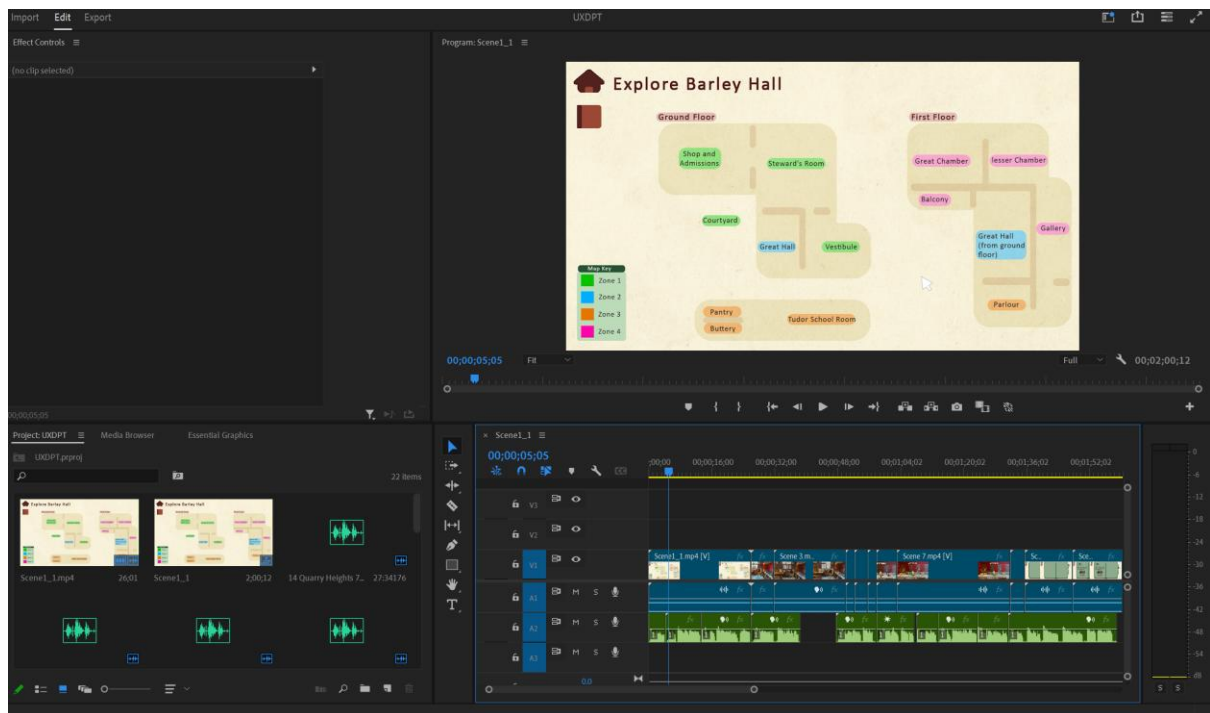


Figure 34 Final prototype in Premiere Pro

I followed the storyboard I had created to map out the prototype to add a voice over that discusses the functionality being demonstrated and used a combination of web page designs made entirely in photoshop and images and videos I gathered from the Barley Hall site to demonstrate what an example interaction would be with this concept as a working product. I used videos where I moved the camera slightly to each side and then used Adobe After effects, animating an arrow icon I drew to demonstrate holding and dragging the mouse over the room view to change the perspective. I used the mouse icon to direct to the information being discussed on screen throughout the video.

Critical Reflection

I aimed to implement a journal for users to test their progress, which worked well because it gave users incentive to fill this information by clicking on objects in the rooms. I respond directly to the questionnaire data directing the preference for automatically collected responses. I aimed to use the building map as the homepage for users to navigate the experience and chose their room to explore. This worked well because it followed the map used in the building and also used the zones to separate information, the same way in which this information was displayed in previous resources. This could be further improved by indicating to users which rooms they have explored when they return to the home page. The virtual space worked well in showing an accurate representation of what volunteers can expect when they visit the halls. However, the colours used for the majority of icons are now significantly less visible against the realistic background, in comparison to the drawings used in the lower fidelity prototype. It is now a lot harder to spot the icons which could negatively impact the user's experience. This can be improved by reconsidering the colour choices, and potentially swapping to a lighter colour that still fits in theme with others in the design. However, the highlighting objects with a white shadow worked well and made it clear which objects the user could interact with when hovering over them. The limited movement to predetermined locations also helped break down the room into sections and help to decide where best to place the user so they can click on the objects. I would reapproach the progress bar in future by adding a small animation where users can see it filling up, rather than the sudden swap to a full box. This visual aspect would make the feature more exciting and provide incentive for the user to continue.

References

Barley Hall, (n.d.). *Barley Hall*. [online] Available at: <https://www.barleyhall.co.uk/> Accessed: [09/12/2024]


Don't Nod Entertainment, 2015. *Life is Strange* [PS4 game] Tokyo: Square Enix

Google, 2001. *Google Earth* [online], Available at: <https://earth.google.com/web/@0,-0.81176281,0a,22251752.77375655d,35y,0h,0t,0r/data=CgRCAggBOgMKATBCAggASg0IAAA> Accessed: [08/12/2024]

Matterport, 2011. *David Kato College, Band 2 accommodation* [online], Available at: <https://my.matterport.com/show/?m=ULb3oiDMeHk> Accessed: [08/12/2024]

York Archaeology, (n.d.) *Barley Hall notes for room guide volunteers* [pdf] Accessed: [01/12/2024]

Images used in design

Description	Image	Source	License
Worn textured background image (wooden floor background)		https://www.freepik.com/free-photo/wooden-floor-background_4100933.htm#fromView=keyword&page=1&position=1&uuid=393a93cd-1b0c-4d37-8c15-def4cb5a9694	Designed by Freepik