

# Design Documentation for ‘Highbound’



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# Overview

## Gameplay

Highbound is a platformer/adventure game which is set in a mediaeval fantasy world. Smooth lighting and a clean design help portray the eerie feeling of the game with a level of mystery added.

The game runs smoothly with only a slight delay on landing after a jump and a cooldown between melee swings, the mechanics consist of mouse-based third-person control, melee attacks with Mouse 1, movement using WASD and a jump, as well as a double jump, with the Space Bar. You win the game by defeating the Wizard atop the Tower and you lose by depleting your Health to 0 from 100.

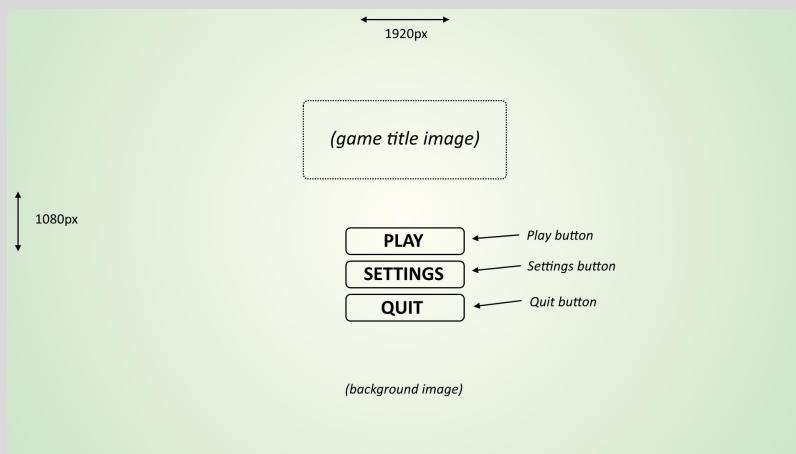
The game has a lot of hidden interactions with each other, there are collisions between the player and the environment (e.g. the fence, the walls, the training dummy, the torch braziers and the enemies). The player and the enemies cannot occupy the same space and thus, they bump into each other. All enemies have three hit points, including the Wizard boss, and after all three hit points are depleted, they ragdoll and their collision with the player changes to one where they can pass through them without an issue.

## The audience, Platforms, Marketing

The target audience for this game would be people who prefer platformers and middle age (mediaeval) settings, the game was released for PC, however, other platforms were considered due to controls being quite easy to translate to a controller. The market has a lot of platforming games, with a few members being inspirations or similar to ours; for example, Getting Over It with Bennett Foddy, Jump King, Tower Climb and Shovel Knight.

## Designs/Art

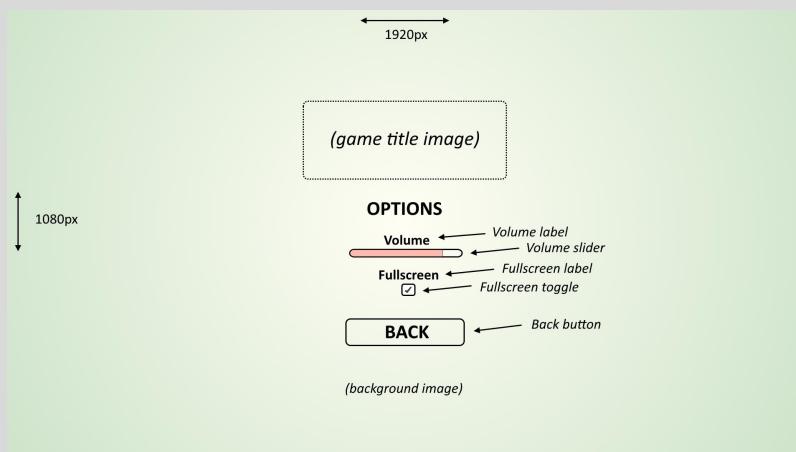
### User Interface Mockups



*Main menu user interface mockup*

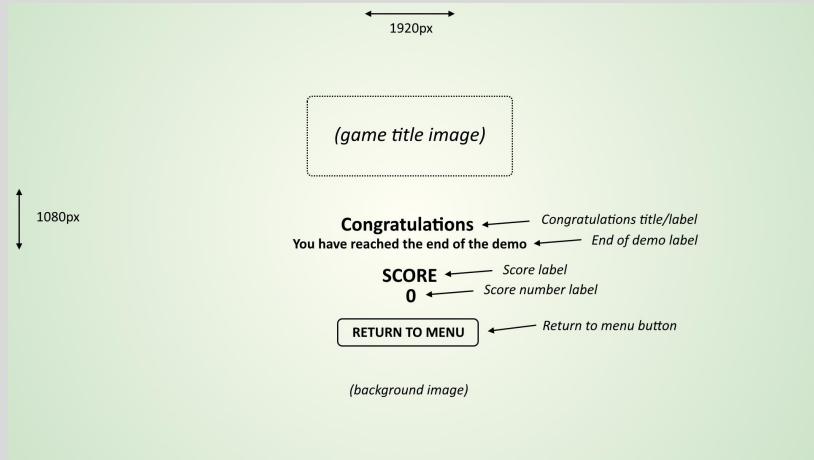
The first screen players will see is the main menu including several buttons, a title graphic, and a background. As this is what players will see first, a simple design was decided on, so as to not overwhelm the player straight away. The title and background images are also a good way to set a tone for the game and make it look appealing.

- The first button is the play button, this will bring the player to the start level scene within the game which is why it is at the top.
- Next is the settings button. This will bring players to a new menu without changing scenes. Players may not always want to see or be introduced with options and so it was put in another menu that players can always go to or return from.
- Finally is the quit button which simply quits the application.



*Settings menu user interface mockup*

Within the settings menu, players can adjust the global volume of the game, and toggle fullscreen on or off. Once they are happy with their settings they can use the Back button to return to the main menu. As it is within the same scene the player will not have to wait for each menu to load again as the Settings and Back buttons simply toggle each other's menu on or off.



### *Victory screen*

Once the players have reached the end of the demo they will see a victory screen. This will simply congratulate the player and show their final score at the end (Score number label) and allow the player to return to the main menu.

## HUDs and User Interface Implementation



### *In-game score and health bar HUD*

Once in the game, a HUD allows the player to see and track certain things on the screen. In this case, the player will want to see their score and health. For the style, we decided to keep it fairly clean and simple to match the style of the surrounding environment but to also stand out. Although the player may want to see their score and health especially, it is also important that these aren't too distracting or take up unnecessary screen space which is why they are more out of the way and not too big, but still easy to see.



*In-game pause screen*

Highbound also features a pause screen, allowing the player to return to the menu, or simply take a break.



*Death screen*

Players will encounter this death screen when their health is depleted and will be given the option to restart the level with the Restart button.

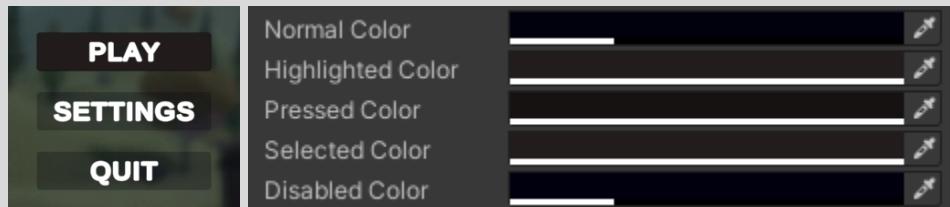


Main menu user interface



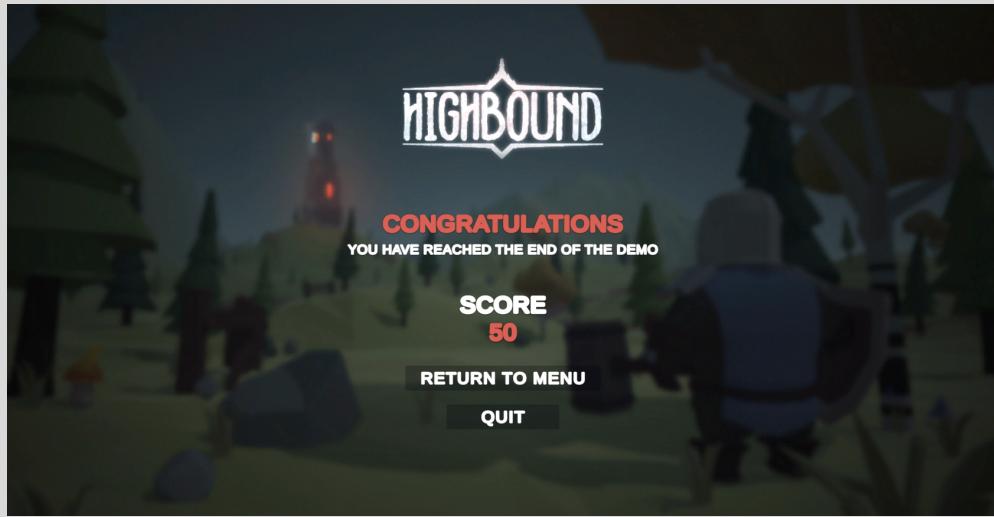
Settings menu user interface

After following and implementing the mockup, Highbound had the main menu that players could be greeted with. When it came to the look and feel of a title screen to greet players with, we wanted something with exciting and interesting visuals but without an over-complicated interface. The images and audio (exciting adventure music) used help achieve this.



UI buttons and interactivity

As well as having functional buttons, it was also important for these buttons to be interactive and *feel* like buttons to the player. A good way of doing this was to, first of all, make the buttons look and behave consistently with each other. When hovering over or selecting any button for example this will change that specific button's colour and alpha values. Audio will also play when a button is clicked. This makes for a more interesting and interactive experience when using the menu.



*Victory screen*

If players make it to the end of the game, they will come across this victory screen. This shows the player their final score and gives them the choice of returning to the main menu or quitting. A quit button was not in the mockup but after testing it we decided to add one as this would save players from having to return first if they just want to quit the game.

## Characters

### Designs:

The basic idea of what a knight looks like is that they are covered in armour and carry a sword. Therefore we went with the same idea when designing the player so as not to break away from the idea of what a knight should look like. The colours were also chosen because of this, however, part of the colour scheme was used to show a contrast between the level and the character, making the character stand out more.

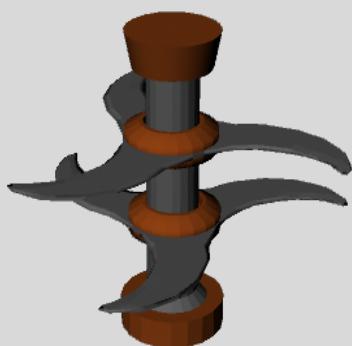


## Features:

One of the features the player has available is the ability to swing the sword to attack. When the player does this there is also an animation that plays showing the character in a swinging motion. The animation depicts the knight as he is swinging the sword with all his strength. This is done to show that the weight of the sword is high and to show that it deals a lot of damage when swung.

## Assets

When developing the assets, we focused on making sure they fit the aesthetics and theme of the game, which is a medieval tower. Therefore I chose to go with a wood/metal texture since that was one of the main materials they were used during that time. I also looked at reference images online (Turbosquid) to come up with the design for it and what shape the blade should be.



Our game focused on having a low poly count for its models for a few reasons. One is that the game would run more smoothly with a lower poly count. Secondly, we thought that the art style would accompany a low poly design better. Another reason for the decision was the amount of time we had to make everything, and we judged that a low poly design would be more beneficially to the project, rather than having too much time focused on designing the assets. All the assets that were made by us, were by using Maya or blender and were exported as an fbx file.

Not all of our assets were made by us, we also took advantage of the free assets on the AssetStore (<https://assetstore.unity.com/>). We found several assets that we thought would work well with our project :

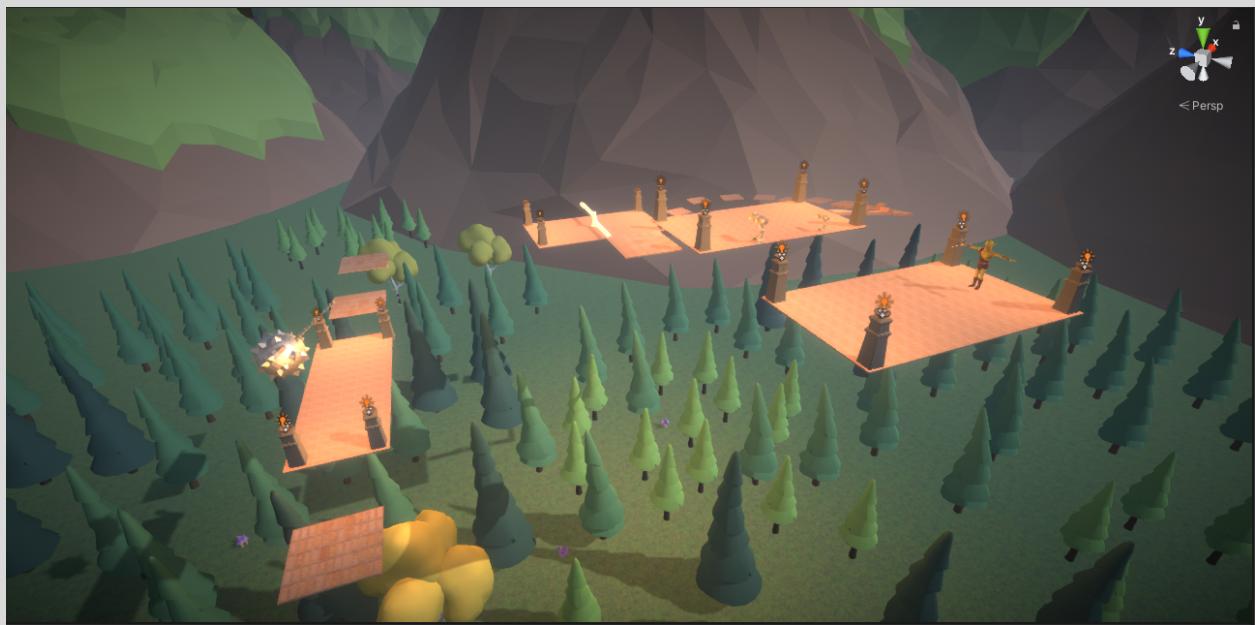
- TileableBricksWall
- Thaleah PixelFont
- Pure Poly
- Historic environment
- HighQualityBricks&Walls
- Cartoon Texture Pack

## Levels

The creation of the levels for this game fit in with the platformer theme very well. To progress through the levels the player must traverse across different sections with obstacles trying to prevent them from reaching the other side.

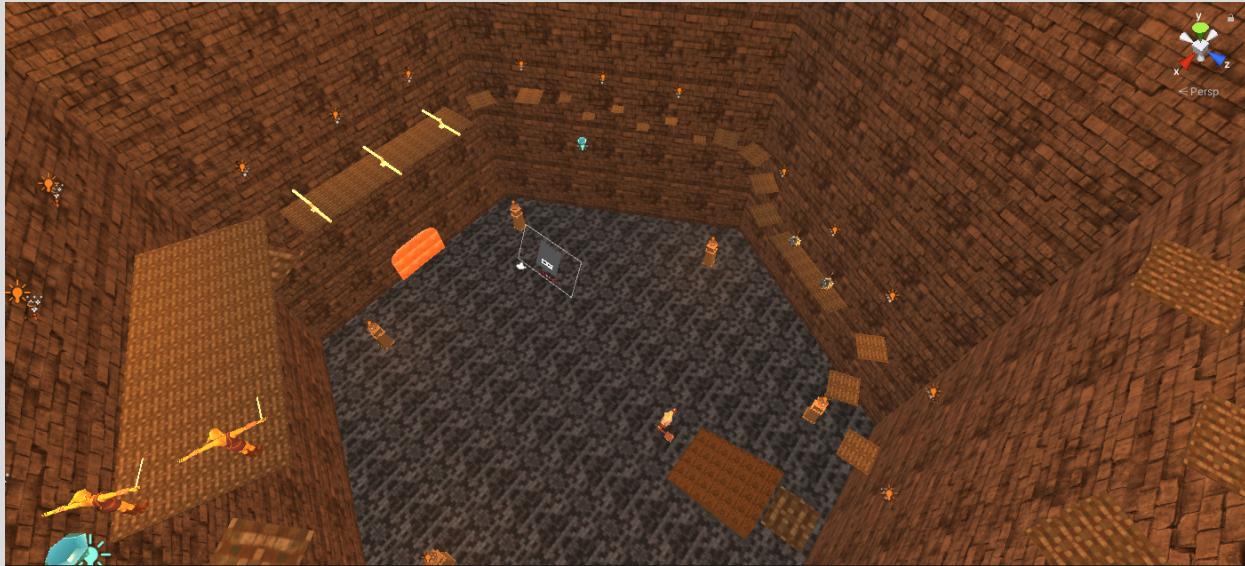
Along with obstacles, there are areas which contain monsters that the player must fight to carry on the progress of the game. There is a lot of space around the platforms so if the player falls off they have a high chance of falling quite far down the tower having to repeat progress. When the player has reached the end of the levels they must fight a boss which results in the game being won.

## Training area



The start level of Highbound has a training section which introduces the player to the mechanics that are found in the main level of the game by letting the player progress through the obstacles provided along with fighting a goblin at the end to introduce the fighting mechanics.

## Level 1



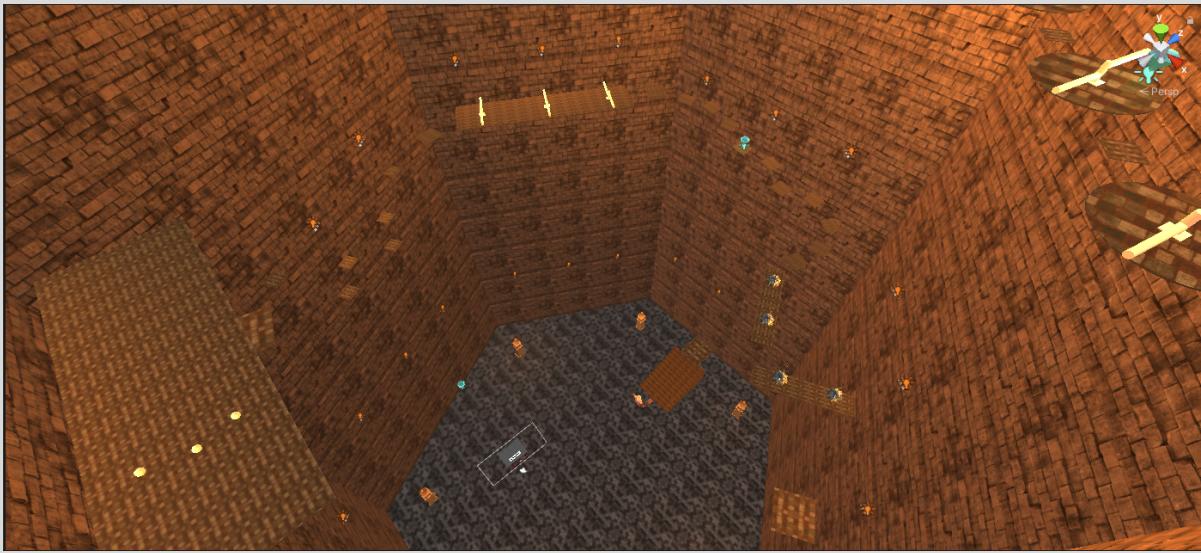
For the first level of Highbound, it is fairly simple when progressing through the level. The first lift will take you to some simple platforms to jump across to encounter the first obstacles which is the chain balls. These are left with enough space for the player to evaluate when the best time is to move forward to avoid being hit off and losing health.

After this, there are some more jumping platforms to get across before reaching the first stage of moving platforms. These platforms move left and right so the player must time their jumps to avoid missing the platform and falling back down.

The final obstacle part of level 1 involves the rotating blades which will damage and knock the player off if they come into contact with them. The player needs to choose the right time to either run past the blades or jump over them to get past the section.

For the last part of the first level, the player must get past two goblins which are designed to run to the player and attack, dealing 30 damage per hit. The player can attack the goblins using the hammer provided. Once the goblins are defeated the player can now progress to the second level.

## Level 2



The second level is a similar layout to the first but with some changes to the platforms, the player can walk on. The chain ball section now has platforms which are slightly angled upwards to help the player progress higher with each jump. The player must jump from one swinging chain ball section to another while avoiding getting hit off.

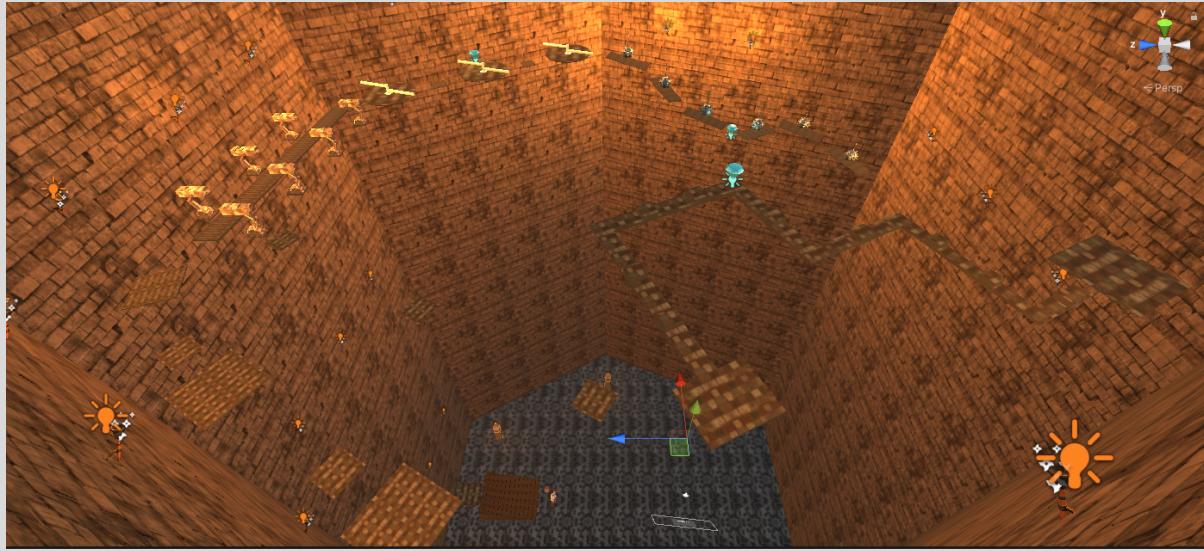
After the chain ball section, the player must jump across some standard platforms which get higher each time and force the player to go left and right other than just forward.

The rotating blade section for the second level now has a platform which is thinner than the platform for the first level to make it a bit trickier for the player to choose the right moment to jump or walk forward.

Before the last section of level 2, there are some more moving platforms for the player to get across. The first and last moving platforms in this section are going up and down so the player must jump from platforms moving in different directions to the next approaching platform which must be timed correctly or the player will fall.

For the fighting section of the second level, the player has to defeat 3 bats which deal 20 damage per hit and are flying so they are a little harder to hit.

## Level 3



The third level for Highbound introduces new obstacles and a new walkway for the player to complete. It starts with a swinging chain ball section which is much trickier than the previous ones. This is because the platforms that the player has to get across are smaller so the space for the player to wait for the right moment to cross becomes harder to navigate also meaning the player has a higher chance of getting hit.

The next section of the third level involves the rotating blades. This section is also different to the previous ones because the platforms they are on are now circular. This means that the player has to constantly be moving when progressing across otherwise they will be hit and either take damage or fall off. In Between the three rotating blade platforms are some moving platforms which make it harder for the player as it means they cannot just walk straight across from the rotating blades as they have to wait for the time when the moving platform is in front of them so they can progress forward.

After this, the player comes across the wind turrets for the first time. These turrets blow wind out which does not let the player take damage but will hit the player off of the walkway if the wind connects with them. The player must walk across a thin walkway without much space to move left and right. The player cannot walk straight across so they must time their movements carefully.

The final section of level 3 includes a thin walkway with small blocks which force the player to jump over them. This could cause problems for the player as if they jump at the wrong angle they will not be able to catch themselves back on the walkway.

## Boss Level



The boss level for Highbound is a circular platform which has wind turrets around the edges. The boss is stronger than the previous enemies and the inclusion of the turrets makes it a hard experience for the player to complete. If the player falls here, it will be back to the beginning. After the player has defeated the boss a bridge will spawn to the final door which activates the end game screen.

## Workflow and processes

### Versioning

Versioning of the build takes place by using a centralised version control system on GitHub. The builds and versions of the project are under the same names each time they are pulled and pushed from the GitHub repository process, however, through GitHub's commit history, versions of the project can be differentiated. This differentiation occurs through the text and labelling that is connected each time someone has made a new commit to the repository. When making a new version and changing to the project files, a brief description is attached which can be used to see how the versions and builds have changed and been updated.

### QA Process

The portion of the QA process has been planned to take place briefly during the delivery week of the project. The studio team themselves will contribute to small amounts of playtesting of the builds and will acknowledge any bugs, problems and oversights that they have experienced during this stage. This information is then recorded by contacting the suitable and corresponding people ie. a design flaw would result in the level designer being contacted. All resources for the project have reasonable and suitable knowledge about the Vertical Slice

Demo requirements and needs, therefore, can decide on decisions regarding if the build is ready and successful. The process for QA after the Vertical Slice Demo would be more intensive than beforehand and would require external resources to be hired to carry out the testing. The feedback gained from these external resources will be reported back to the studio team who will be using Jira Workflows for tracking.

## General design direction

The art design reviews are ongoing reviews throughout the entirety of the project and have been recorded via the studio project chat and meetings. Designs would always be discussed and when possible, mockups and brief concepts would be discussed. The project members would analyse the design directions and decide if the direction needed to be changed, or if it was suitable and able to stay on track for the game.

## Playtesting

To test Highbound it was played throughout production. Each time the game was played there were issues and bugs presented and therefore fixed to provide a working game. The white box was tested before the visual design was implemented to ensure that all the mechanics of moving platforms and other obstacles were working correctly.

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