**Development Notes:**

**Week 1 (7-11 January):**

This week, I researched into tranquillity. I specifically wanted to find out what types of things elicit the feeling of tranquillity in people and how I may look to replicate this feeling through the environment I create. Some of the most common themes I found within my research were that **natural environments** induce feelings of tranquillity, while artificial environments have the opposite effect. Areas with a lot of greenery are particularly tranquil. I also found that spending time outdoors has a correlation with reduced stress levels, potentially due to being an escape from social environments, which allows your brain to relax and recharge. In addition to this, there is research demonstrating that sounds from nature have the ability to affect heart rate and have a ‘restorative effect’, reducing our natural fight/flight instinct. In particular, relaxation increases depending on how familiar these sounds are to the listener. I noted that being in close proximity to water is also linked with the feeling of tranquillity and notable colours that help promote tranquillity are colours often found in nature, such as greens, blues, browns and also pink. Other colours can have the opposite effect and should be avoided (such as red, as it signals danger).

**Week 2 (14-18 January):**

I spent this week researching into wonder, as this is the secondary part of the brief. I found that wonder is comprised of a combination of emotions such as surprise, curiosity and joy and that it can be brought about by **beauty** or something that is **rare or unexpected**. While researching, the most common themes I saw were that wonder is derived from **curiosity**, though I also found that wonder can be ‘revived’ through silence, solitude and simplicity. In addition to this, I found evidence to support the idea that feelings of wonder and awe can often be found within **nature**, particularly areas in nature that contain a lot of beauty. Another important factor is that while wonder is comparable with surprise and can come from something new or unusual, it should not be something threatening.

**Week 3 (21-25 January):**

This week, I spent my time creating moodboards in order to use as inspiration for the VR environment I will be creating. I focused on natural environments and beautiful things found in nature, as this was supported in both my research into tranquillity and also my research into wonder. As this was a common theme among both emotions, I thought that this would be a good place to start. I also explored subtle ways that I could present more wonder through curiosity and rare sights that would not be considered threatening but could also tie into a natural environment.

**Week 4 (28 January – 1 Feb):**

This week, I began to produce sketches based from my research and moodboards from previous weeks to further plan out what assets I may want to include in my scene and where the player will be positioned in relation to the world (what will be immediately in front of them, etc). I started to consider which exact elements I would be taking from my moodboards and research and how they may tie in together to create a complete environment.

**Week 5 (4-8 February):**

This week, I created a document detailing the concept I had come up with for the project which I will be presenting for feedback. I added some of my moodboards, sketches and detailed what sounds I may intend to include (such as water and bird song) along with a brief overview of what the scene will be. I also included notes on how I intend to include elements of wonder and tranquillity and basic details of what my colour palette will be.

**Week 6 (11-15 February):**

This week I greyboxed my environment in order to plan out where each asset may be placed and where the player will be placed in relation to the environment around them. I also began to model the basic terrain shape.

**Week 7 (18-22 February):**

This week, I presented my initial concept to Dave in order to receive feedback on how my idea can be changed/iterated before I begin the modelling process. I received a lot of useful feedback on my idea, including what I should consider when selecting the sound effects that will be used in my scene and what time of day my scene should be set in. We discussed what the player may be thinking and feeling upon viewing the environment I intend to create and how I can elicit the desired emotions.

**Week 8 (25 February – 1 March):**

This week, as I already had the shape of the terrain in place, I began to model the basic type of tree that will be scattered around the area. I decided to begin modelling the assets that will be the most prominent first as these are the priority since these will be visible throughout the entire area. I also decided to prioritise the assets that I am less confident in modelling first, in order to make sure I have them in place early in the project and would have time to change them later if necessary.

**Week 9 (4-8 March):**

This week, I textured the tree I had created during the previous week. I decided to experiment with different textures on the trees to see how stylised or realistic they should be and what gives the best effect.

**Week 10 (11-15 March):**

This week, I modelled the cherry blossom tree. I decided in my milestones that this would be a high priority task which should be created early on in the project as it will be the focus of my environment and will be a prevalent feature as it will be a lot larger than all of the other trees and is also more noticeable as it is the only cherry blossom tree. This asset is also particularly important as it will be directly in front of the player when they are placed into the environment and will be in the centre of the environment overlooking the pond.

**Week 11 (18-22 March):**

This week, I textured the cherry blossom tree. I needed to ensure that it was to scale with the other trees and matched the art style of the trees I had previously created. I experimented with a variety of different textures on the branches and leaves.

**Week 12 (25-29 March):**

This week, I modelled and textured the stones which will be scattered around the scene to give the environment a more authentic natural look. As these assets were fairly small and basic to model, I was able to texture them in the same week I modelled them. I placed my assets I have created so far into a test scene in 3ds Max to experiment further with placement and to ensure that the scene looked complete and no assets appeared to be out of place.

**Week 13 (1-5 April):**

This week, as I had enough assets created to begin assembling the environment and placing each object, I began to set up my Unreal project to be compatible with VR and importing the assets I have made so far. I wanted to do this a few weeks before the end of the project in order to ensure I would have enough time as I am unfamiliar with working in virtual reality and wanted to have the time to experiment with the settings and lighting in Unreal Engine. I knew that my scene would look much different when looking at it through virtual reality rather than in the Unreal Engine viewport, so I also began to move my models based on what I could see through the headset. I found it very useful to begin doing this at a fairly early stage, as it took a lot of tweaking to get the environment to look in proportion with the size of the player.

**Week 14 (8-12 April):**

This week, I modelled and textured the luminous flowers I had planned to include in my environment after discussing with Dave how I wanted to include elements of wonder in my scene. I also had enough time to model and texture a few other small assets to place around the edge of the pond area, such as the long grass.

**Week 15 (15-19 April):**

As I had needed to move a few elements around after looking at the project in VR, I decided to remodel the initial base terrain and grass I had created to fit the placement of the assets better. I also needed to make sure that the player could not see over the edge of the terrain and that the pond was deep enough, as previously it was very shallow. I spent a lot of time experimenting with the textures on the terrain and what the grass would look like.

**Week 16 (22-26 April):**

This week, I created a plane for the water and experimented with different ways to texture the water. I initially intended to use assets from the starter content in Unreal Engine to create moving water, however, after testing the starter content, I decided that it looked much too realistic in comparison with the assets I had modelled so I decided to match the water and the texture to the other features so it would not look out of place. I assembled my scene in Unreal and presented what I had created so far to Dave, in order to gain feedback on what I had created so far and what could be changed. He provided me with more direction on the project, suggesting that I should make the environment look less orderly, as if it had been untouched for some time. He discussed with me the sense of wonder and discovery that this would give to the player. He also provided me with feedback about features like the grass I had created based on this, as the grass I had created previously had a very neat and orderly look as it was placed in straight lines. He also suggested that I could create and scatter a lot of wild flowers around the area to achieve this affect of the place being unkempt and that this would give the player a lot more points of interest to look at. He also suggested that I should remove the log I had placed in my scene, as it gave the impression that someone had recently visited this area.

**Week 17 (29 April – 3 May):**

This week, I adjusted my assets based on Dave’s feedback the previous week. I changed the grass to appear less orderly and also created a lot of varieties of wild flowers I could scatter around my environment. In order to gain inspiration for what these flowers would look like, I also created additional moodboards. I set up the lighting in my Unreal project and removed the log as Dave advised. I added the sound effects I had collected and set up the lighting in Unreal Engine.

**Week 18 (6-10 May):**

This week, I finalised my scene and created a video of the VR experience from the player’s point of view, ready for submission. I also created the executable file, ready to upload to Github. This week, Mike from Dreadnought Studios also came in to view my progress on this assignment.