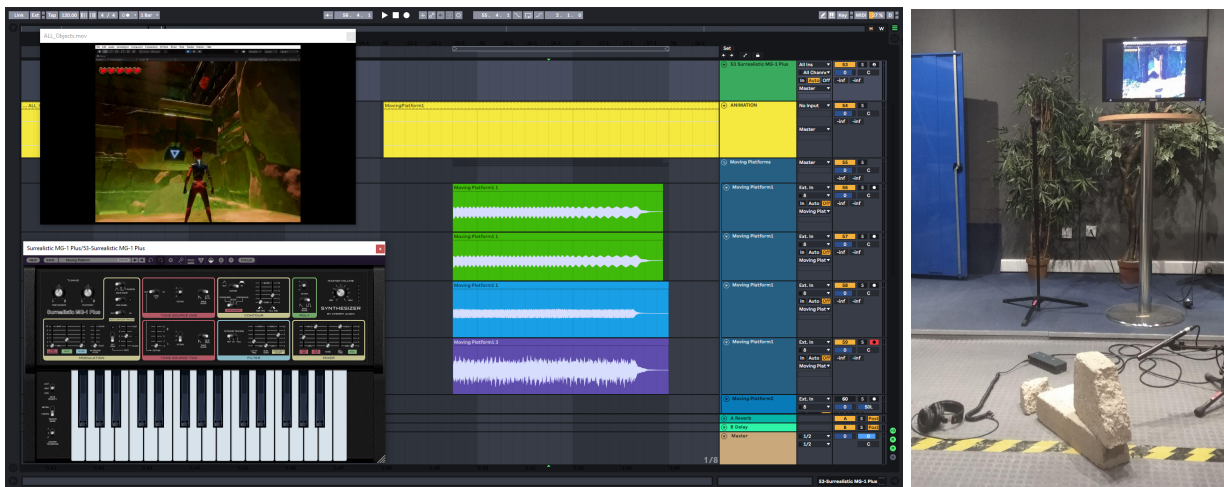


LOGBOOK

General approach

The sound design for this game was done without having heard any sound or music of the original game. This is to prevent the process from being influenced by the knowledge of what the game 'could/should' sound like and.

Almost all of the sound was created or recorded live on top of gameplay video recordings. This enabled me to see the animations 'in-game' while looking for the right sound. To set up this workflow, a full playthrough was screen recorded and chopped into clips. These would then be put on display in the studio by a recording assistant or imported into Ableton.



**Recording and creating sound real time while watching in-game animations
in the Foley studio and in Ableton**

All recordings were done with a RODE NT1 shotgun microphone in the studio or with a Zoom H6 stereo field recorder outside or at home. Apart from sounds including animals or water, the complete sound collection was built single-handedly.

Sound Creation

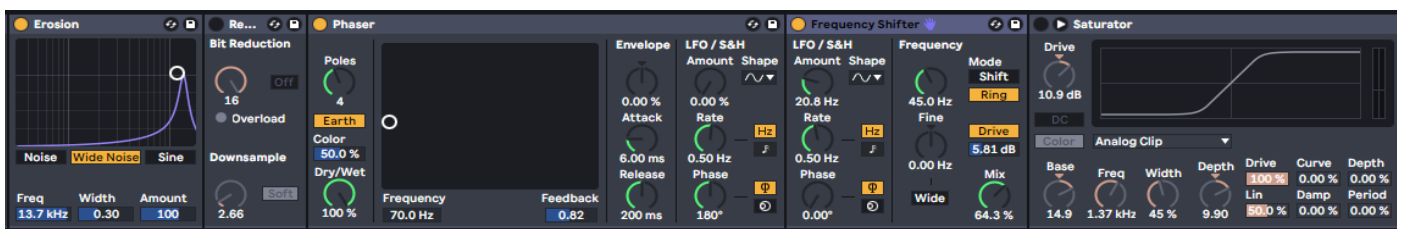
Creature sounds

The creature sounds are created by heavily processing animal sounds for the environment and human voice for enemies. Basic techniques are used like:

- Reversing
- Altering playback speed

I found that using only these two techniques, a chimpanzee could be made to sound like a dinosaur and a hog like a rodent. On top of this, the following effects were applied:

- Saturator - to make up for the lack of higher frequencies in the pitched down samples
- Gated Noise - to add 'hiss'
- BitCrusher - to create some sharp high-end layers
- Overdrive - to make the sound warmer and rougher
- Ringmodulator - to get a pulsing or gurgling character
- Phase sweeper - to create frequential envelopes
- EQ and Phaser (non-altering) - to shape the overall frequency use and to define tonal identity of the creature



Effects used for animal sounds (Ableton)



Effects used for Chomper and Spitter (Reason)

Interactable objects

All sounds for alien interactables were created using the Surrealistic MG-1 synthesizer plugin made by Cherry Audio.

For the Loops:

A combination of harmonic tones with light modulation. The chosen pitch, intervals and modulation for each object depend on what the object represents in the world (e.g. friendly/dangerous/inbetween) and what fits their visual aesthetics (e.g. weight/movement)

On top of the Surrealistic MG-1, two effects are added

- Ableton's 'Corpus' - to add metallic overtones.
- Reverb - to make them sound spacious and to add a nice tail after the interaction. The reverb tail includes all the notes of the Interacting sound as well of the Loop sound.

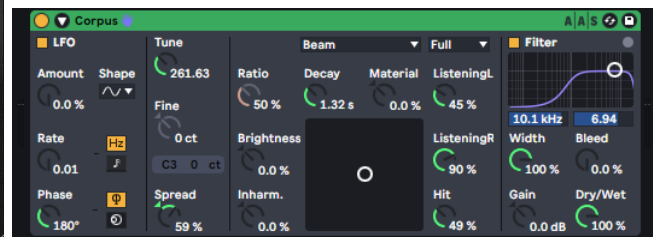
Depending on what the animation needed, some, or all of the above techniques were used to create their sound. The pitch of the resulting clips was later adjusted to match the scale of the music.

For the Interactions:

All interactive animations show a quickly expanding halo that suddenly pops. To match this, a swift opening of a filter envelope with brief Attack and immediate decay was used, that is timed with the halo animation. It uses a different set of notes than the ones used by the Loop of that object. They have a material sound layered on top of them that corresponds with the object's material, which can be wood, stone and crystal



Halo animation on interaction



Synthesizer and effect used for alien objects; Surrealistic (Cherry Audio) and Corpus (Ableton)

Technological sounds

Mechanics

The mechanical sounds for the Grenadier and the landing spaceship were made by layering up multiple recordings of metal objects. Some of which were pitched up or down. Ableton's 'Corpus' was used to add metallic overtones.



Synthesizers

To signify the difference between alien and human technology, the spaceship uses a whole different synthesizer, the Prophet V plugin by Arturia. It is used to create the stationary 'cooling fan' sound at the start of Level 1. It consists of noise and two tones with a minor7 interval. This gives the ship a nice machine-like character that holds harmonics to sound friendly and pleasant, but is not too obviously of a musical nature.

Feedbacking signal flows

Creating signal loops in Ableton helped me produce frequency rich sci-fi sounds that were used for the landing spaceship. The signal chain is fed by noise from the Prophet V and ran through a reverb, pitch shifter and delay. The 'sweep' of the landing was created by altering the delay time, while looking at the animation and recording in Ableton.



Synthesizer used for the spaceship; Prophet V (Aturia)

Ellen

Locomotion

All locomotive sounds for Ellen were done over video recordings of her movements in the game. Different techniques were tried out to see what worked best. I found that the recordings made with hands rather than feet sounded better, because it allowed me to create more subtle movements and get less bass in the recordings.



Recording footsteps

Weapon

The swinging sound of the staff Ellen uses as a weapon is a broom stick that is swung over a Zoom H6 Stereo recorder. The recordings are heavily EQ-ed to get out the lows and mids of the swinging sound.

Implementation

Environment

Animals

The aim for the animal sounds was to make them sound natural but at the same time unfamiliar. To achieve this, sounds from a database of animal sounds were processed in Ableton using the techniques described earlier. The sounds were designed after writing the music for the game, to be able to make them fit in nicely with the music. The animal sounds are divided in categories, depending on where they live.



Tree animals live across the river in Level1, they use a greater amount of reverb zones to get their sounds sounding throughout the whole valley



Shore animals live alongside the shore of the river in Level 1. Their sounds are placed on the existing sound sources used for the 'swamp' sounds

The 'Tree animals' and the 'Shore animals' use only one sound clip per source because they represent a single animal located in one place. They use the 'AmbiendSound' script to be played at random intervals.



Cliff animals live on the higher cliff edges in Level 1

The 'Cliff animals' use multiple sound clips per audio source, to represent all kinds of different animals walking on the cliff. They use the 'PlayAudio' script to have random sounds play at a fixed interval.

The 'Flying dinosaurs' use one audio source high up in the sky. On Awake, they scream with an interval of 15 seconds. After the music is triggered their interval is set to 40 seconds, using a Box Collider with an 'ActivateTrigger' script.

The two EelDogs have a looping splashing sound placed on them. They use the same animation and the same audio file. To prevent them from sounding identical and from causing comb filtering (when triggered with a few milliseconds delay between each other) one of them uses a 'TimedObjectActivator' script to get its sound clip and animation unsynchronised from the other, resulting in a more natural effect.



EelDogs - symmetrical animation



EelDogs - 'TimedObjectActivator' script breaks the symmetry and prevents summing and comb filtering

Reverb and low-pass filtering are used to make all the animals sound closer or further away, respective to their distance from where Ellen mostly walks.

Wind

Wind was recorded in Victoria Park in London and uses two layers rendered on top of each other:

- Trees in the wind from afar
- Leafs of a weeping willow close by

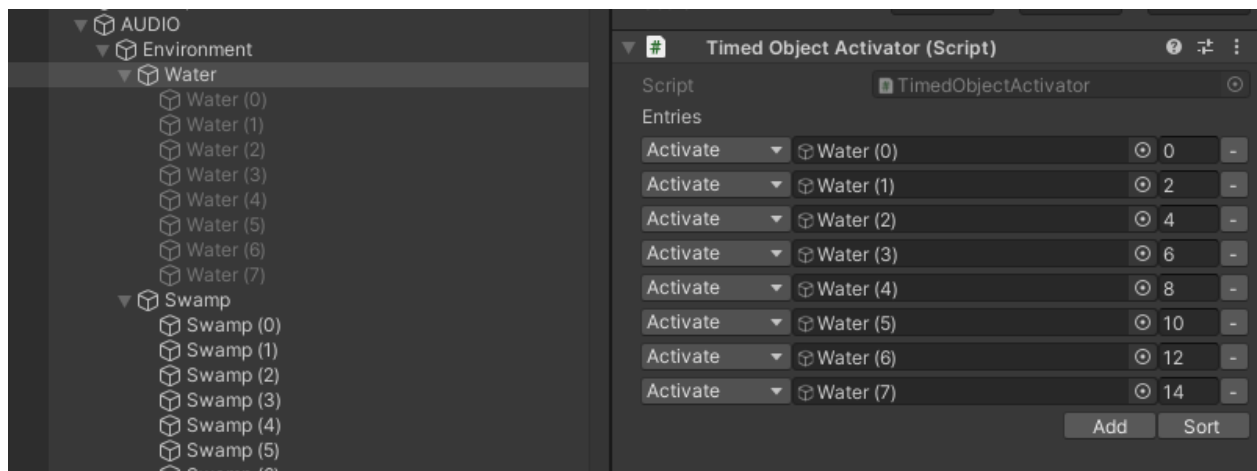
To distribute the sound over the world, an audio source was placed on one of the Hanging Moss prefabs. This way, the wind comes from the swaying vegetation itself throughout the whole environment. An opening and closing low-pass filter was used to make the wind swell and then weaken, on the rhythm of the movement of the swaying animation.

River

The river uses multiple sound sources that all use one single audio clip. They use a combination of the scripts 'PlayAudio' and 'TimedObjectActivator' to make all the audio sources audible at all times without the sample ever being triggered in two places at the same time.



Locations and max distances of the sound sources of the river



'TimedObjectActivator' triggers the sound sources one by one

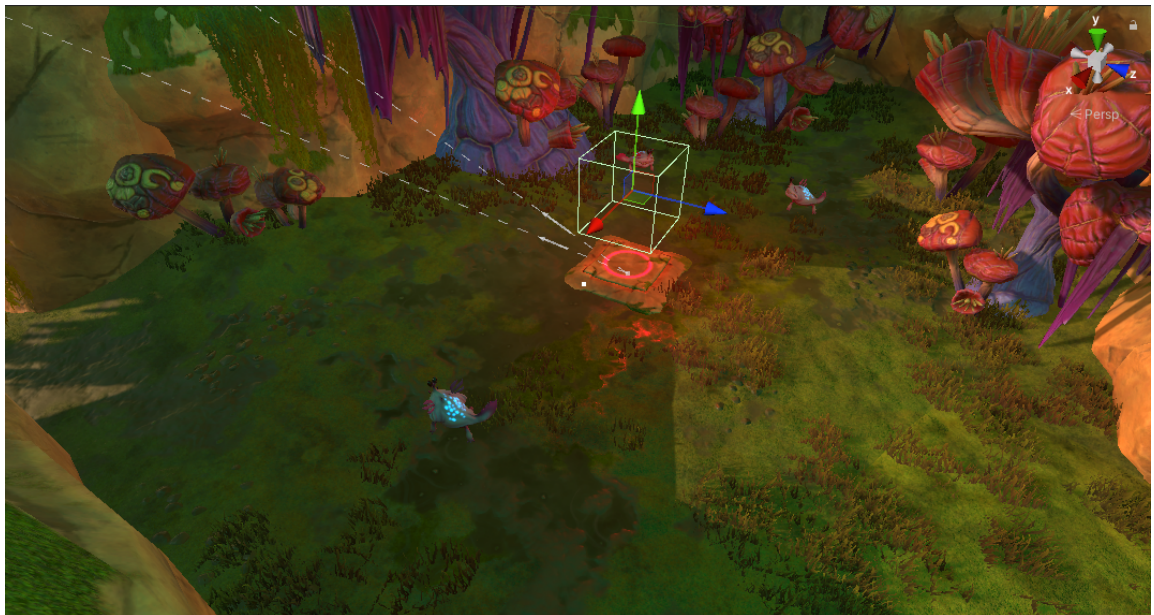
Music

Music in Level 1 is activated and managed by multiple scripts and triggers. A Box Collider is used to activate all the music stems at once, although the mixer makes sure that only one of the stems is audible.



Box collider 1 - activating all music stems

A second Box Collider is used to activate the 'EnvironmentalZoneManager' script, which manages the music mixes based on Ellen's location. The reason it is set up like this, is that the music should progress to a next phase after Ellen has activated the first Pressure Pad.



Box collider 2 - activating the music manager