CW2 REPORT DOCUMENT

Abstract

This report describes the design process of the team in creatng the single player level by the name “Glafia”.

INTRODUCTION

The following report outlines the development process, playtesting reports, and the decisions made between iterations of a single-player level "Glafia". Unreal version : 4.24.3

https://www.youtube.com/watch?v=8JZQQLPjf0s

CONTEXT

This is to be a first person action game centred around the character of Derek Dury, a Glaswegian security guard and army reservist who gets caught up in a drug deal gone wrong. The overall game arc sees Derek mistakenly identified as having stolen £500k from Glafia (the Glasgow Mafia) and follows his journey of escaping their grasp and ultimately wreaking revenge on two corrupt police officers (Sergeants MacGregor and Toshan) who actually stole the money and who leaked the rumour about Derek. The game's tone is somewhere between Breaking Bad and The Sopranos, by way of the Punisher and The Bill. The game's desired play experience is fast paced cover based combat mixed with stealth sections and occasional puzzles aimed at breaking up the combat and giving the player a chance to use a different set of skills rather than being 100% intense shooting 100% of the time.

The game is set in a near future (2025) Glasgow which has seen public finance cuts lead to an increase in gangland crime as police can no longer manage with their reduced firepower.

The player must also be introduced to the basic mechanics of walking, running, crouching and jumping. The level must also include a puzzle. It should take 5 to 10 minutes to play through the level.

END-USER ANALYSIS

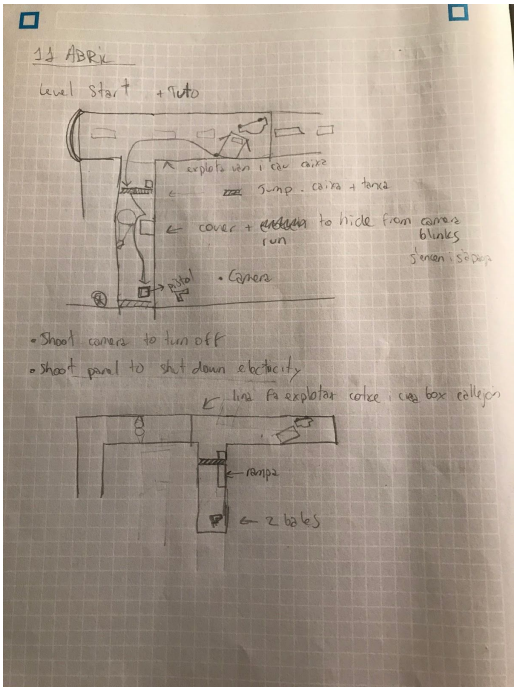
The player is assumed to move with "WASD" keys. It is also assumed that through repetition, player will understand the puzzle and identify where the threats are.

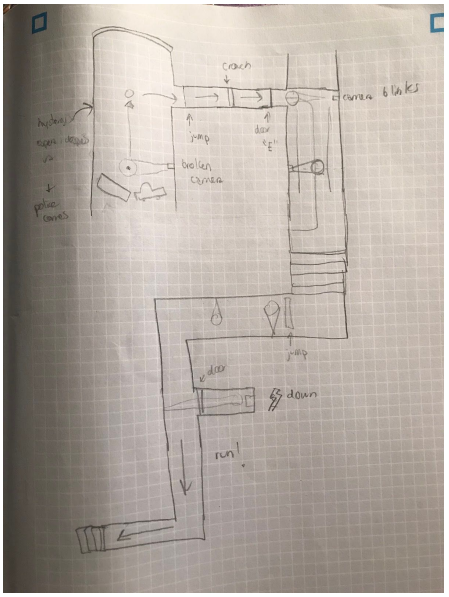
DESIGN CONSTRAINTS

In the aesthetic aspect, the limitation on the different variation of assets was noticeable. Very few assets were included to help to set the tone of the environment so the player is expected to find different models that act as placeholders. In addition, since the player BP could not be modified, the player will have a gun which should not be there.

INITIAL PROTOTYPE

To begin with the project, some sketches were designed in a sheet (see the picture below). The environment is setted up in Glasgow 2025 so after the van accident, the player will have to manage the escape without being detected by the cameras, here is where the puzzle will take place.





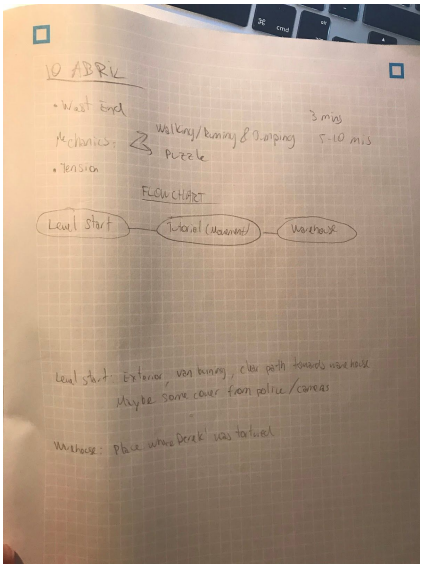
The first idea was that the player would find a gun in order to knock down the cameras, but after some sketch iterations this idea was removed since shooting has no sense if the player does not want to get attention. Instead of shooting, cameras will blink or move so the player will time when to go through the level.

The flow chart was the following:

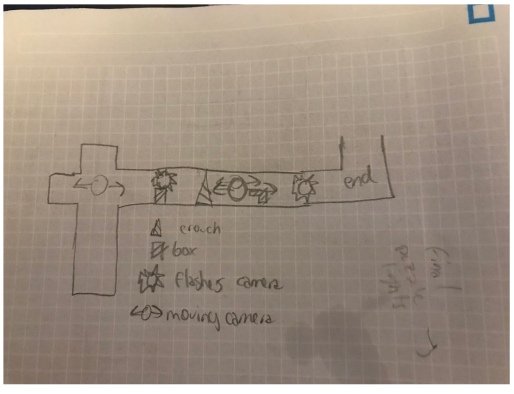
Level Start->Tutorial Movement-> Puzzle-> Escape

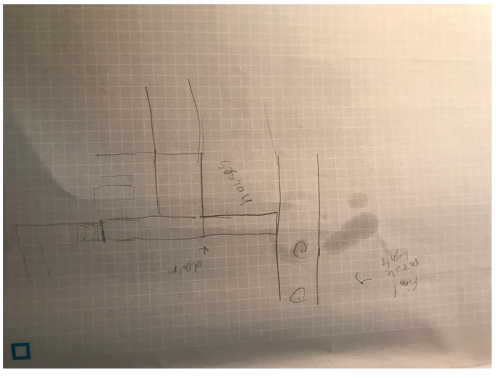
The intention of this first sketches was to create to clear zones:

- Zone A: Where the player starts and learns the mechanics of the game
- Zone B: Puzzle using the mechanics in order to complete the level



Once the sketch design of the Zone A was clear, the next step was to sketch the Zone B, with the puzzles and the end of the level.

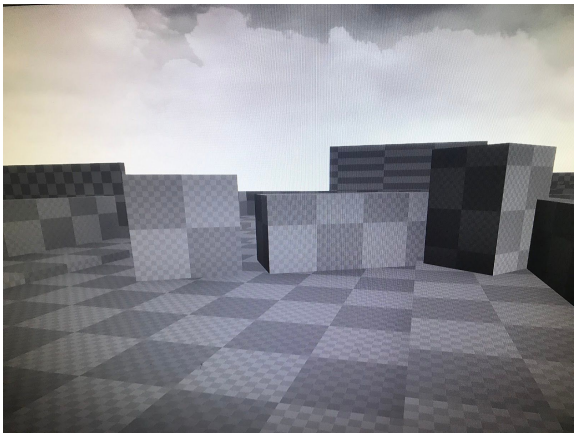


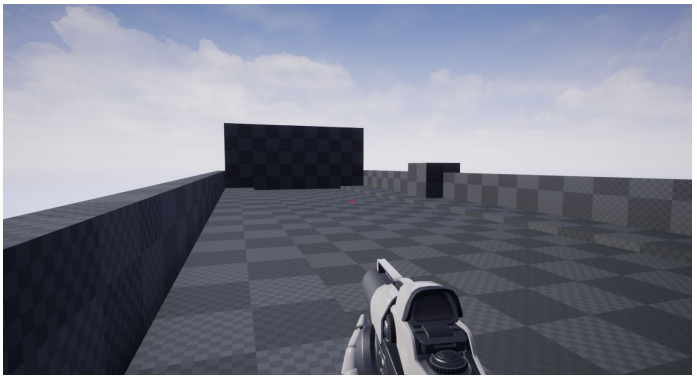


The player will end at the beginning of the level without knowing, then the police will arrive and the level will be finished.

WHITEBOX

The first jump into the engine was to recreate the level with placeholders (whitebox) to test the size and the movement of the level.



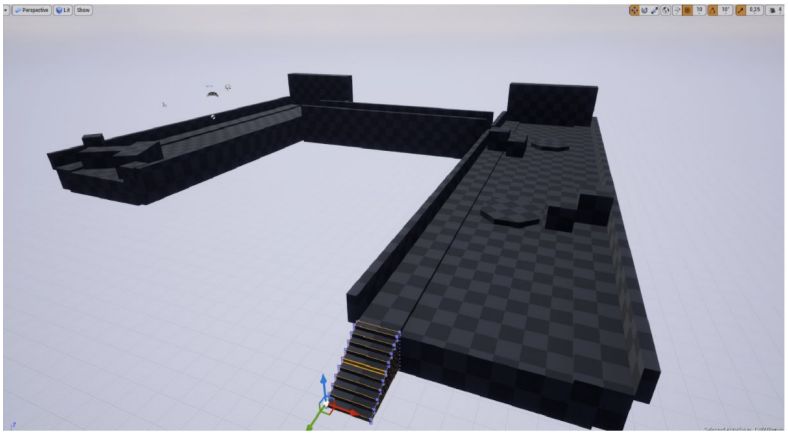


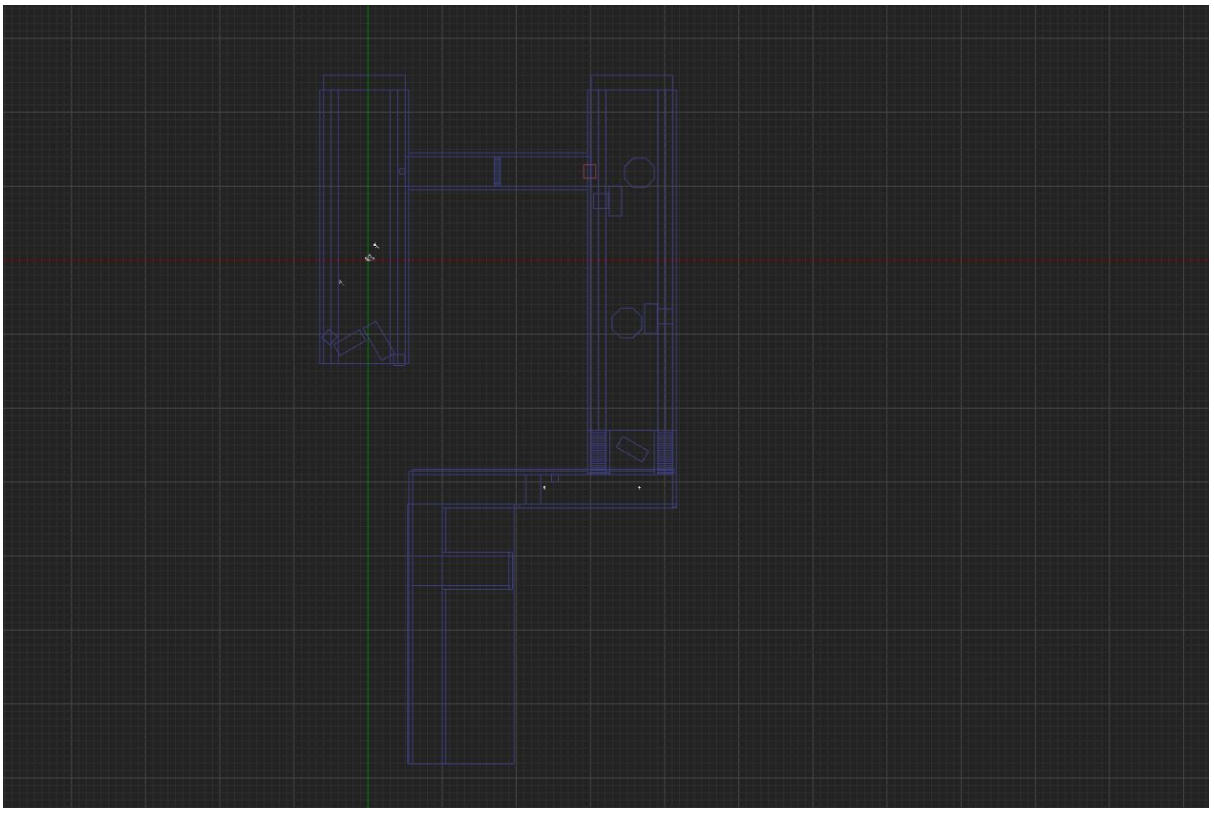
At the start the player will be looking at the van from the street. He will be forced to go to the box on the middle of the path, which will trigger the message: "Press Space To Jump"

From now on, the player will recognize jumpable boxes so the text will not appear in the next attempts.

The following step was getting into blueprints. The mechanics to learn were crouching and running so re-using the jumping learning method, those were created.

As the mechanics were being implemented, the whitebox was growing. In the picture it can be appreciated different collisions on the street and some cylinders. This represent the area of the cameras. (Areas that the player will need to dodge).





This is a top view of the Zone A

To do a recap: Player starts in the middle of the street after the van crashes with another car. In order to get away from there, he will find a box which would trigger a message: "Press Space To Jump". After jumping the player will get in a path where will discover that he can crouch too. Once getting into the second street (on the picture is the right one), cameras will be presented to the player. Using only the walk mechanic and timing when to cross he will get inside the tunnel.

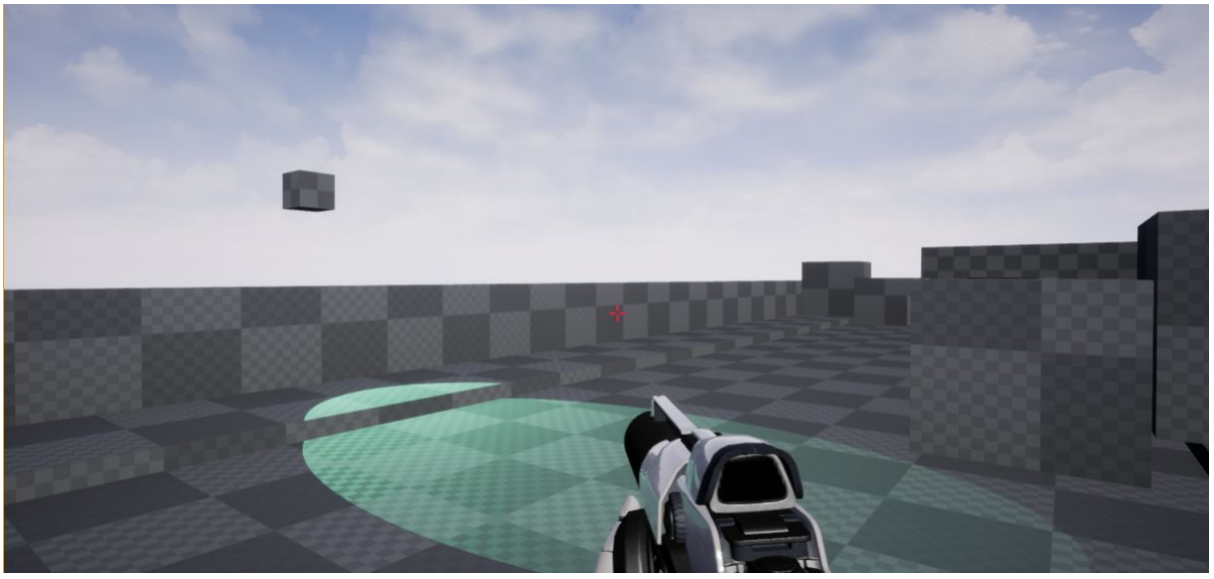
Tunnel: Can be spot in the picture, it creates like an "F". Inside the player will be required to combine different mechanics to go through it until he notices that one camera does not allow him to continue. He will press 'E' in order to switch off the light but suddenly a camera will discover him and the alarm will start to sound. The mechanic of running will be learned and he will get outside the tunnel.

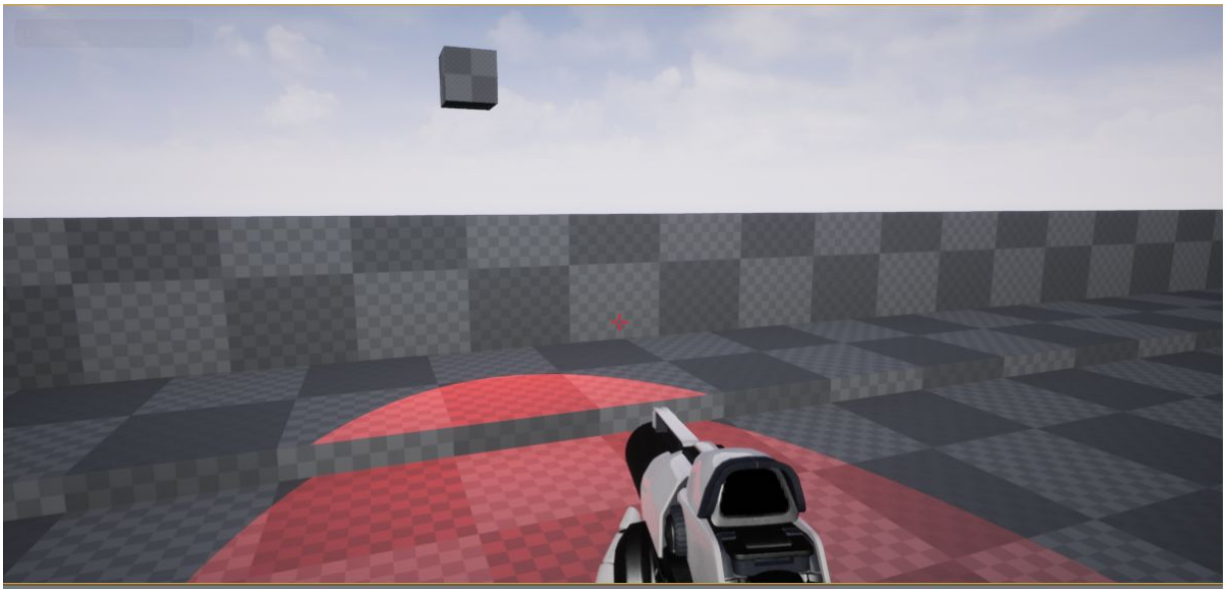
After finishing this part, a problem appeared. The FirsPersonBP could not be edited for academic reasons. so all the mechanics implemented in there were transposed to level editor BP.

STATIC MESH

Blueprints:

Before jumping into the transition to static mesh, the camera functionality was implemented via Blueprints. In this way, the level could be tested and spot any conflict area.





The design of the camera behaviour is the following:

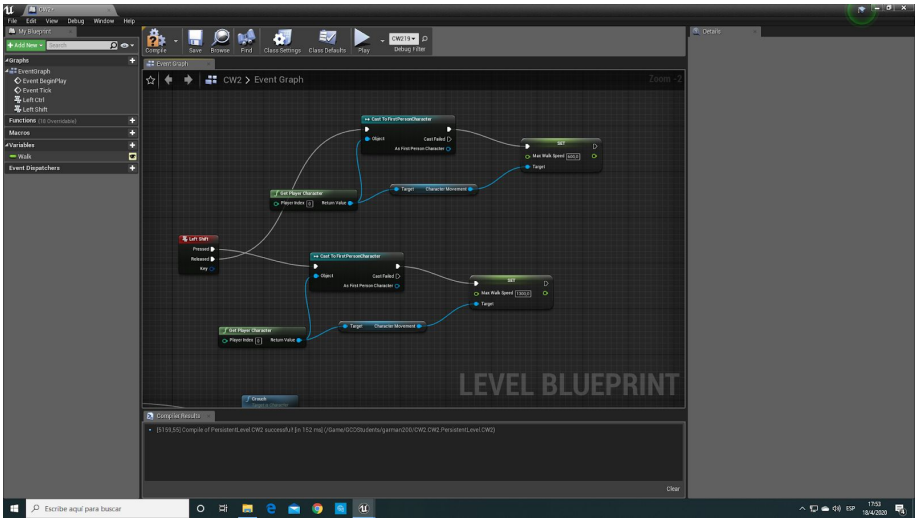
There are two types of cameras:

· Static
· Dynamic
Static Cameras are in a fixed spot and the light blinks. In this way the player can identify when is it safe to cross.

When there is no one detected the light is green. If the player gets inside the trigger and the camera is on, the light will turn red, a sound alarm will start playing and the player will restart the game.

The Dynamic Camera can be found at the end of the level where the player will need to run to get cover from it, take advantatge of the situation and get to the end of the level.

With the cameras feature, the player is forced to follow a clear path. A good example is inside the tunnel, he will not be able to go through the last corridor so he will find out a button that will trigger the running mechanic.

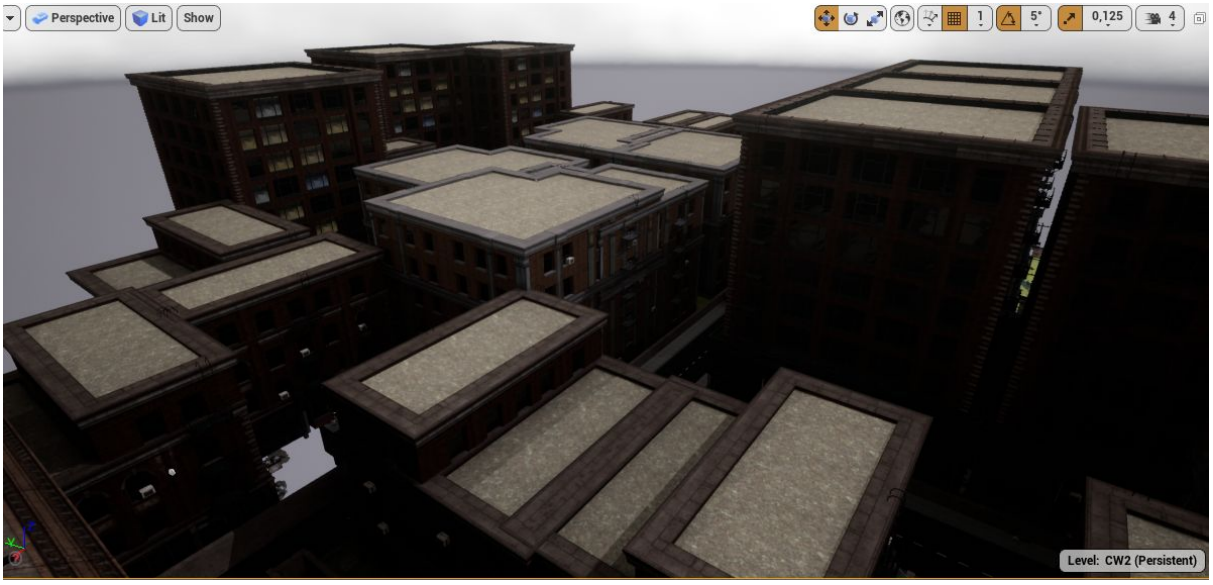


WhiteBox to StaticMesh:

After checking all the assets provided it would be hard to recreate the level designed so a few assets were downloaded in order to fill the environment. To create the feeling of Glasgow a skybox should be created so here is a picture of the result:

To set up an afternoon tone the angle of the main Directional Light was rotated, added more clouds and changed the color to a colder one.

When the level was all with static meshes the light needed to be repositioned a few times so the level was not so dark.



Note that in different circumstances some of this assets would be replaced for different ones. There are some spots where this models act only as placeholders. I.e: Streets that are closed by walls || repetition of same buildings, etc.

The scripted event was created after the environment was in Static Mesh. It will occur inside the tunnel, when switching off the lights the player will be spotted and the alarm will sound.

AUDIO

Audio plays a very important role to create this tension mood. So via Blueprint it was added a Main theme that loops once it gets to the end. And some extra sound effects, like the alarm one.

Since the FirsPersonCharacterBP could not be edited, FX like footsteps are lacking.

Reflections

Based on the experience from the Unreal Tournament map, which was the first coursework for the subject, this level was approached in a more efficient way. Following a constant schedule result to achieve a level with all the initial designs (there were no cuts on design terms) and not being forced to work more hours on the last days.

Conclusions

Despite being the first time using Unreal Engine, I managed quite good with the BluePrints and the PostProcessing of the lightning. Probably I should have given a little more importance to the assets available in order to not only design the level movement but also the environment recreation. I could not end the report without saying that I liked this first approach to the level design and I am willing to keep learning and working on it!

References

www.turbosquid.com
EpicGames Bazar
www.freesounds.com