<u>Template layout</u>

Level 1: Jack Kellett
Level 2: Edward Thomspon

<u>Research:</u>

<u>Level 1 Tutorial Research from Jedi: Fallen Order</u>

Star Wars Jedi: Fallen Order is a third-person action-adventure game developed by Respawn Entertainment in 2019 (published by EA). The game follows the character of Cal Kestis on his journey hiding from an evil empire as a fugitive from a bygone era. In the introduction for the game, there is a fun sequence that teaches brand new players how to use the different various combat mechanics whilst keeping it fast-paced and action-packed for more experienced players.

The player falls onto a moving train and is immediately introduced to two of the game's weaker combatants whilst receiving a prompt on how to activate and use their weapon. In the next room the players are then introduced to a larger number of enemies, however this time no prompt is given to them. This form of introducing a concept to a player and then testing them on how it works is used repeatedly throughout the level to great effect as it gives the players a chance to use what they have learned to progress through the level. Then as the level progresses this pattern continues whilst introducing more complex combat mechanics to the player and giving them higher difficulty challenges to overcome. Further increasing the action whilst keeping it at a manageable level for the player.

This form of tutorial could be replicated quite simply by creating a closed-off area that introduces a mechanic or concept to the player and then the player cannot progress without using said concept. Making sure that the player does not get confused later on in the game as the mechanic has been reinforced inside of their mind early on. One example of this would be that the player would walk up to a ledge and then be prompted to climb up it using the jump button. Then the player would be presented with another ledge they need to climb, else they would not be able to progress. To take this system even further, mechanics could be given a visual cue when they are able to be used. This would allow a player to be able to easily recognise that when they see that visual cue they are able to use the corresponding mechanic. Using the ledge example, a climbable ledge could have a unique texture applied to it so that when the player sees it after the initial prompt on how to use it they know that that type of surface is climbable. Another example of where this system could be used is in teaching a combat "blocking" system. The player would be thrust into a combat situation where they would be able to block an attack. A visual cue would appear on the enemy combatant that is then accompanied by a prompt telling the user what to do to block the attack. Then further on in the level, the user would be presented with a similar enemy to defeat that uses the same "blockable" attack, testing the player on whether or not they picked up on the visual cue and reinforcing what they should do in that situation.

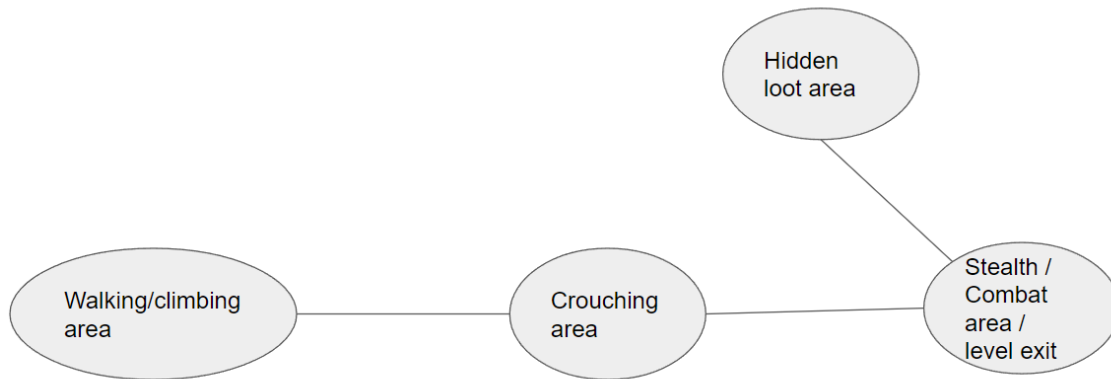# Level 2 Research into Arkham City: Mr Freeze boss fight

Batman: Arkham City is a third-person action-adventure game developed by Rocksteady and subsequently published by Warner Bros in 2011. The game follows the DC Superhero, Batman, as he traverses around a city-turned-prison, fighting crime and uncovering a secret plot from within. Later into the game, the player is introduced to a prolific villain that faces Batman in the comics, Victor Fries, otherwise known as Mr. Freeze.

The player's first encounter with Freeze is presented as a boss fight wherein the player must defeat the villain in order to progress in the story. Normally, the player controlling Batman can just punch their way through each and every boss until eventually they are victorious, however, the Freeze fight differs in such a way that is refreshing to the player. The character of Mr. Freeze is canonically an intelligent scientist and therefore it would make sense for him to learn and counter each of your attacks if you use them multiple times. The player is forced to remember all of the different takedown mechanics learnt prior to this fight and adapt their battle strategy in order to succeed. Everytime the player uses a gadget to damage him, Mr Freeze recovers and then a voice line plays whilst he disables any way for the player to use that gadget within the room. This could be recreated by recording the gadget used and then through the usage of audio and event triggers, notifying and disabling each usage of that gadget. For example, Baman can use the Remote Electrical Charge gun to activate electromagnets to disable Mr Freeze's exosuit. After this method is used once, Mr Freeze will walk around the room and destroy all of the remaining electromagnets within the room, permanently disabling the usage of this gadget. The fact that the player cannot use the same method to damage the boss constantly, makes for a more interesting and thought-provoking boss fight.

The concept of having the player learn features or abilities throughout the game, with the intention of utilising them to their advantage later on, is not a foreign concept within action-adventure games. For example, the player may receive and be taught how to use a grappling hook and then later in the game, the player can use the grappling hook to restrain a boss and assist with the fight. This could be used with our levels by teaching the player how to use mechanics of the game and then implementing the same mechanic later on with a higher level of difficulty or skill to utilise.

Concept Breakdown:

Level 1 Design Concept

```
                                    ┌─────────────┐
                                    │  Hidden     │
                                    │  loot area  │
                                    └─────────────┘
                                             \
                                              \
                                               \
┌───────────────────┐      ┌─────────────┐    ┌─────────────┐
│  Walking/climbing │──────│  Crouching  │────│  Stealth /  │
│  area             │      │  area       │    │  Combat     │
└───────────────────┘      └─────────────┘    │  area /     │
                                               │  level exit │
                                               └─────────────┘
```

The design of the first level first started out through the creation of a very basic node diagram, as seen above, that was used to plan out the basic "areas" of my level and how the player would move from one to the other and what the purpose of each of those areas is.

Since level 1 is the tutorial level the majority of each of the areas should be dedicated to teaching the players the mechanics of the game in an orderly manner. An era for movement, an area for stealth, etc…. Going from one to the next learning as they go.

Ravine Moodboard
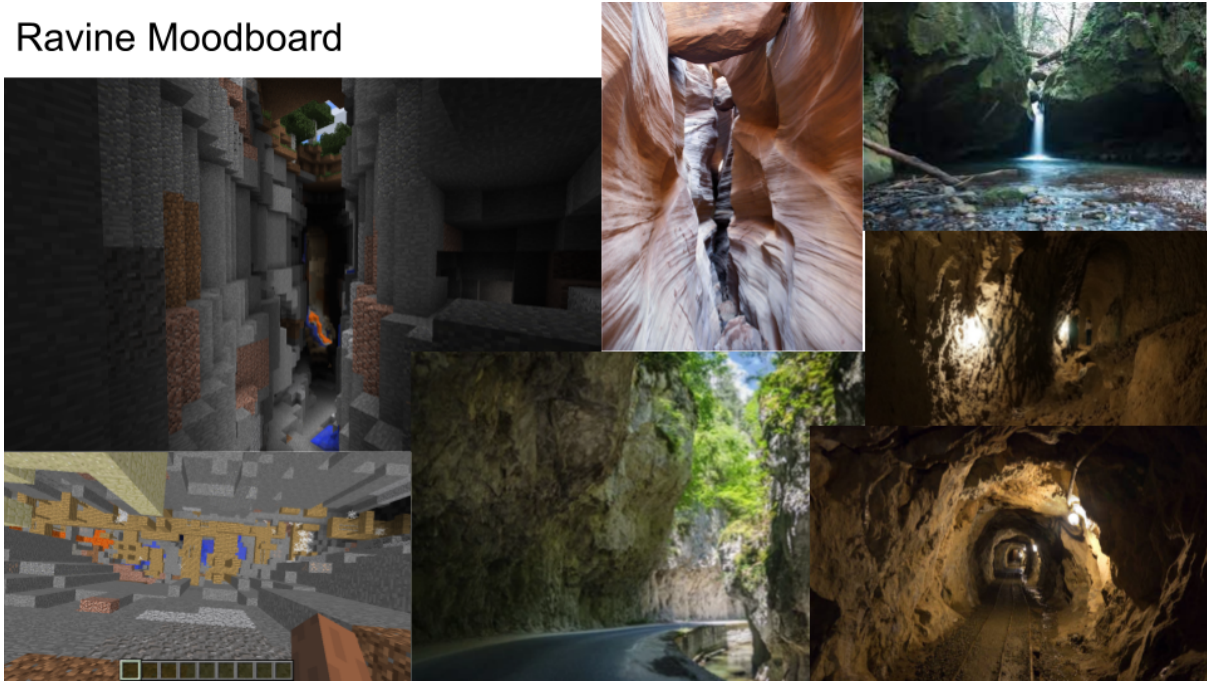
Before deciding how the level was to be played out, a mood board was created to get ideas and a feel for how the level should look and how it should feel when finished and when the player goes through the level, this mood board describes what kind of environment the player will be going through.
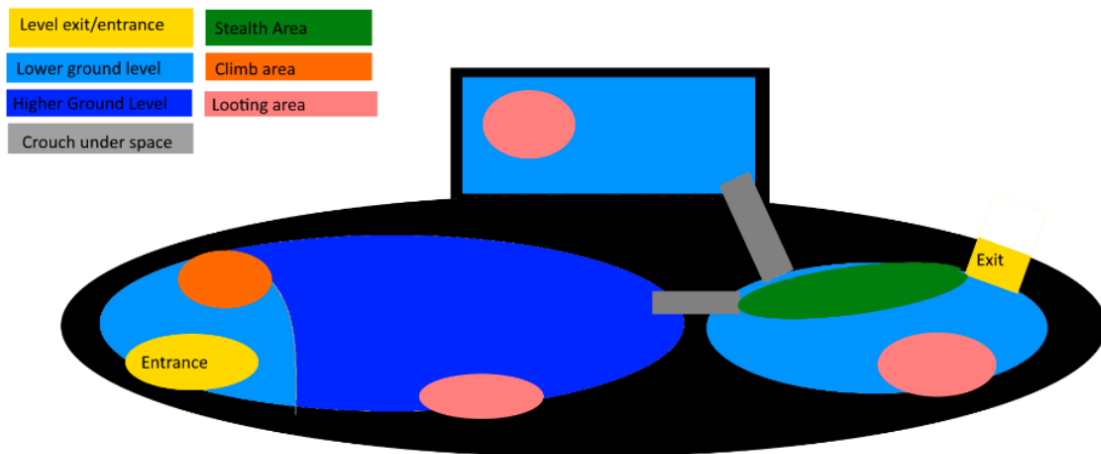

This top-down sketch of the level is a more comprehensive look at the layout of the level. Colour coding was used to show how the level should be constructed, showing where the player should start from and where roughly the player should finish the level whilst also showing the intention for each area.

Level 2 Design Concept
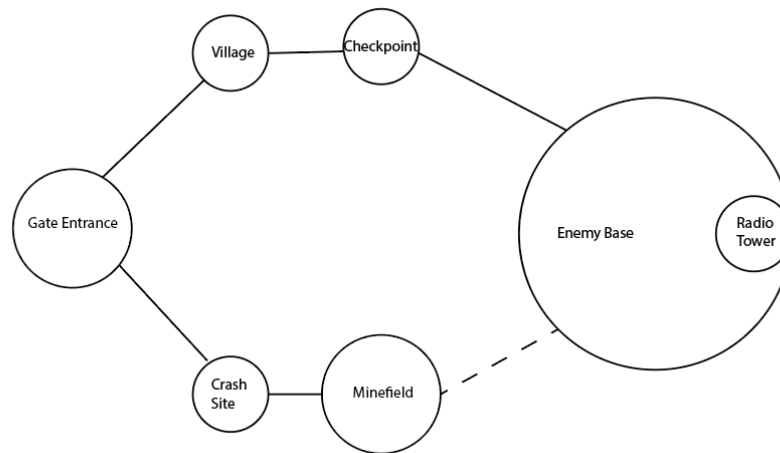
The design of Level 2 started by the creation of the above node diagram consisting of 2 routes through the level. The first takes you through a small village, a military checkpoint and then to the base. The second route takes you to your crashed plane and then there is a minefield which the player can traverse to also reach the military base and radio tower.
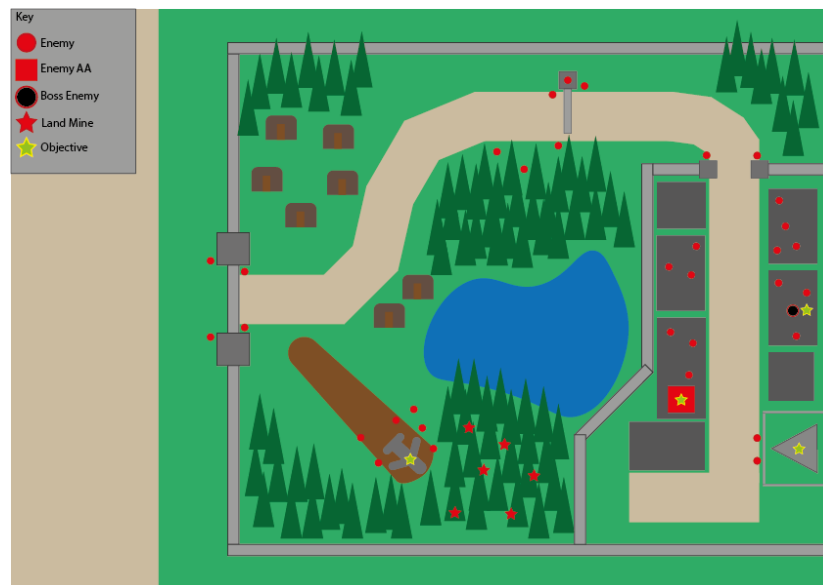
After creating a node diagram, a flat design was created with more detail showcasing the main features that were to be included and giving a rough layout of the level.

First Iteration

Level 1

Basic Movement Area:
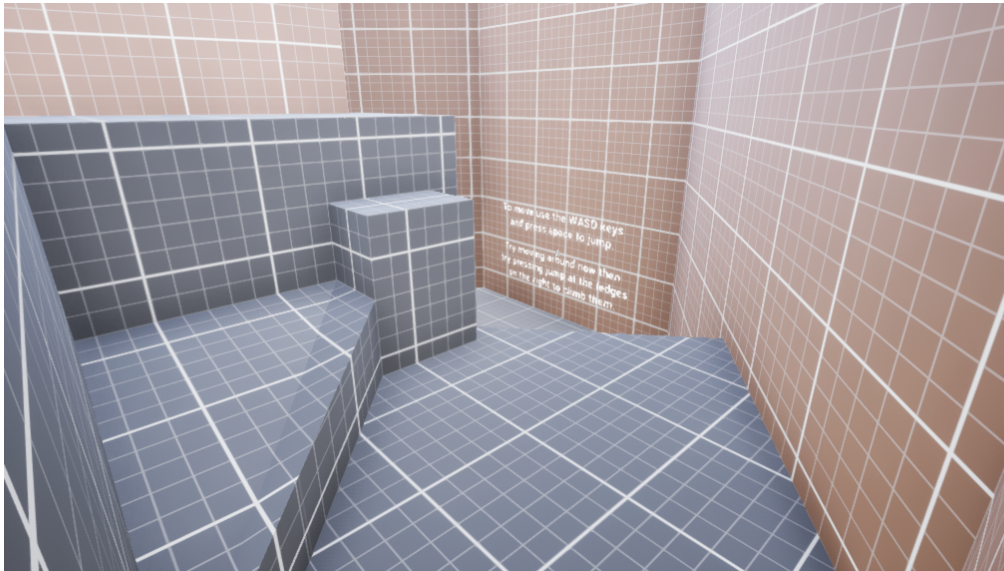
This is the area of the level, outlined in the top-down sketch, where it is intended for the player to learn how to use the basic movement mechanics in the game. They start off at the bottom area where they learn how to move around. The player then notices the ledges at the edge of the area and that is intended to teach them that they can climb up ledges like that to get to a higher-up area. At first, they are prompted how to climb but then as they get past that area there is no prompt meaning the player has to use what they learnt to climb further.

Running and crouching Area:
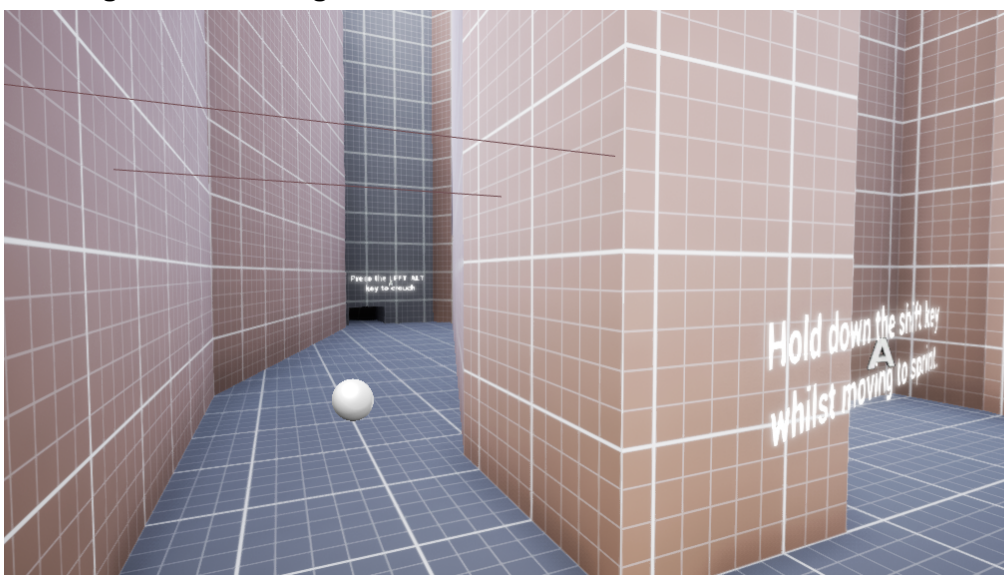
This area's purpose is intended to expand upon what the player learned previously to introduce them to the movement mechanics of being able to sprint and being able to crouch.

Stealth and Enemy Area:
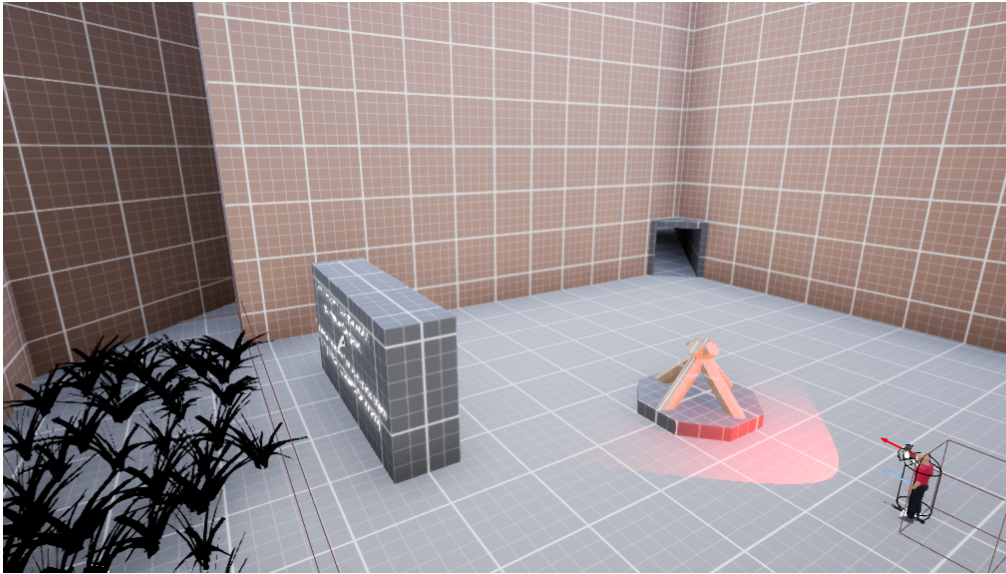
Part of the second half of the level, the intention of this area of the map is to provide an area for the player that teaches them how the stealth mechanics of the game work. Teaching them they can sneak behind enemies to get past them. With the option for the player to find out they can sneak kill enemies, however, they are not prompted to do this as it is intended to give the player multiple options to figure out for themselves how they want to play.

Alternate Route Area:
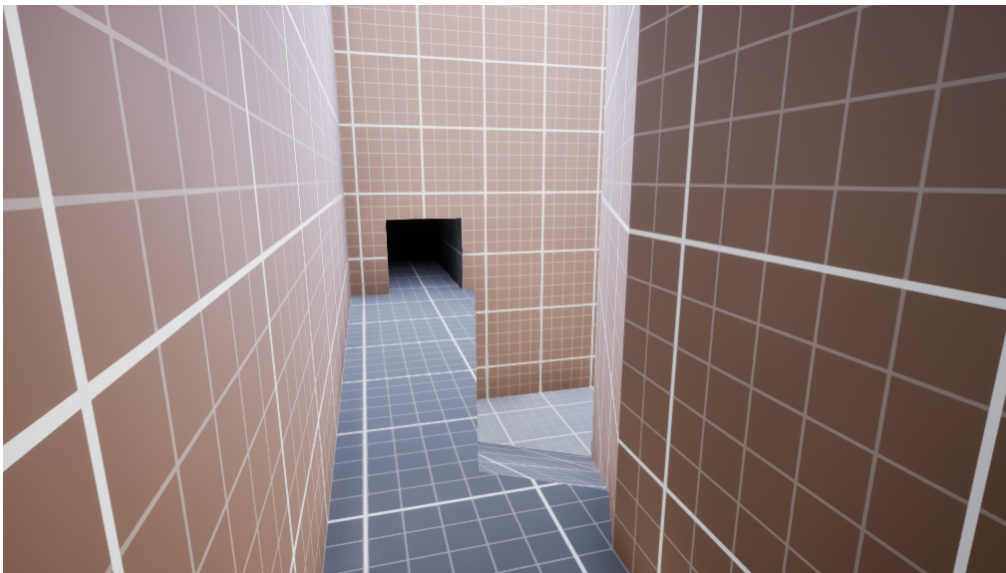
Finally, this route was intended as a secret side route the player could take that would give them a chance to avoid the enemy. However, to encourage the player not to take this route it was placed out of their natural sightlines so that it wasn't the first way to go that they saw.
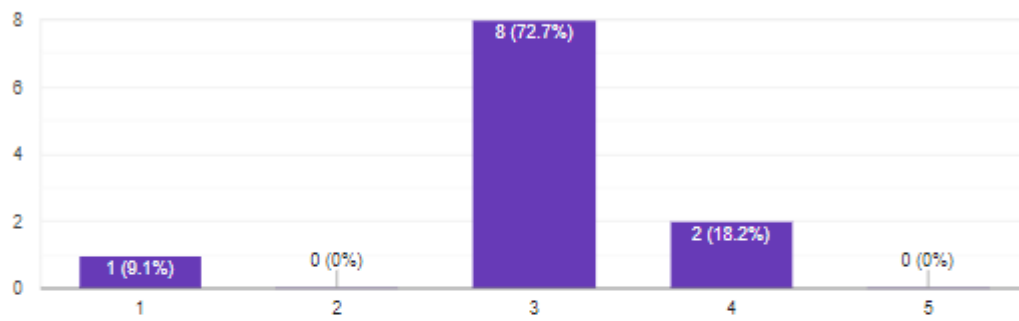
Level 1 Questionaire

Level 1
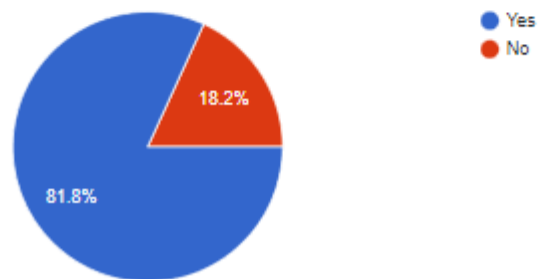
How cramped does the first level feel?

11 responses

Value	Count
1	1 (9.1%)
2	0 (0%)
3	8 (72.7%)
4	2 (18.2%)
5	0 (0%)

Was it obvious where you had to go in the first level?

11 responses

- Yes — 81.8%
- No — 18.2%

How long roughly do you think it took to complete the first level? Do you think that it took too much or too little time?

11 responses

7 minutes

Too short I think, it was a good tutorial though

It was a little short, however I enjoyed the alternate route.

It took me between 3-4 minutes. I think it was just about right

test

3 mins

I think the first level could be a little longer

too short

Too little time, I ended up going back on myself and not understanding to go down the corridor. This point needs to be obvious, and also it should really link to go into an open space as thats where the second

Do you have any more suggestions for how the first level can be improved?

11 responses

prompt text for when you can takedown the guard

Some more stuff to do, maybe a shooting tutorial as well. Multiple pathways could be fun

I feel like the length of the level should be a little longer, however it was well designed to teach the player the basic mechanics.

Add waypoints and maybe add a little more content to make it more interactable.

test

Instructions in how to reload and pick up weapons.

no

add more to it

Bigger vents, camera clips

Scenery does feel bare, I didn't understand what the environments are, this needs to be built upon more having unique objects in each part to really define it, the camp site is a good start, but you need to take this further, benches, tents, etc etc to make it feel like a believable world.

Avoid having tool tips in text, instead explain things in play. For example, make the grass and AI next to one another when the player enters a space, so they automatically understand that grass hides you from AI, rather than explaining in text. think about designing a space that explains it through play.

Maybe the climbing section at the beginning could be made slightly less obvious towards the end

The level seems to just tell you the controls and then end, aside from the encounter with the guard at the end, there isn't much for the player to do

Level 1 Feedback Summary And Changes for Iteration 2

What went well?
-    The consensus from the first question, about how cramped the level felt to players was right in the middle between too cramped and too big meaning that they felt it was just right.
-    It was obvious to the players where they had to go since it was effectively a straight line so this should not change.

What didn't go well?
-    Although the question about the length of the level got mixed responses, in general, most players thought that it was a bit too short of an experience and they didn't realise they had completed the level.
-    The small "cave" that the players have to crouch and walk through was too small so the camera tended to clip through the mesh.
-    The scenery was too bare and the players didn't understand what the environment was supposed to be.

What is going to stay the same?
-    The rough width and height of the level, as it was already the perfect amount to make the players feel like they weren't too cramped or in too much open space.
-    The level will be kept as a mostly singular path to ensure that players will know where to go still.

What is going to change?
- Increase the size of the cave that teaches players crouching.
- Remove wall text.
- Add a prompt to stealth kill the first guard.
    - To accommodate for this a generalised prompt system will be created that can display any message required to the player UI.
- Add more rocks to the scenery and make the environment more jagged to make it feel more ravine and cavelike.
- New areas are going to be added to the level, extending its length to accommodate the changes below.
    - A new area to teach the player how to shoot the silenced gun and to teach them how to push boxes.
    - A puzzle area that gets the player to put together all they have learnt to complete the puzzle and go on to the next level.

Level 2

Top down:
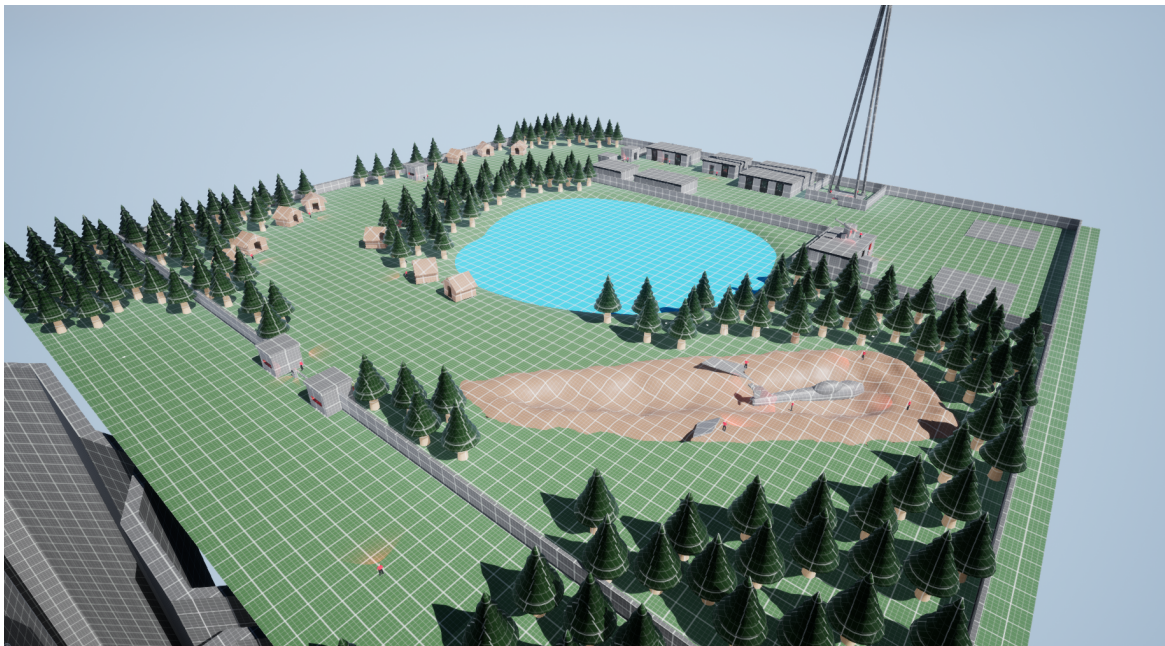
This is an aerial screenshot of the state of level 2 for the playtest. At this point, lots of things planned were missing but we received some decent feedback for the current state of the level and received some ideas to make level 2 better.

Entrance to level:
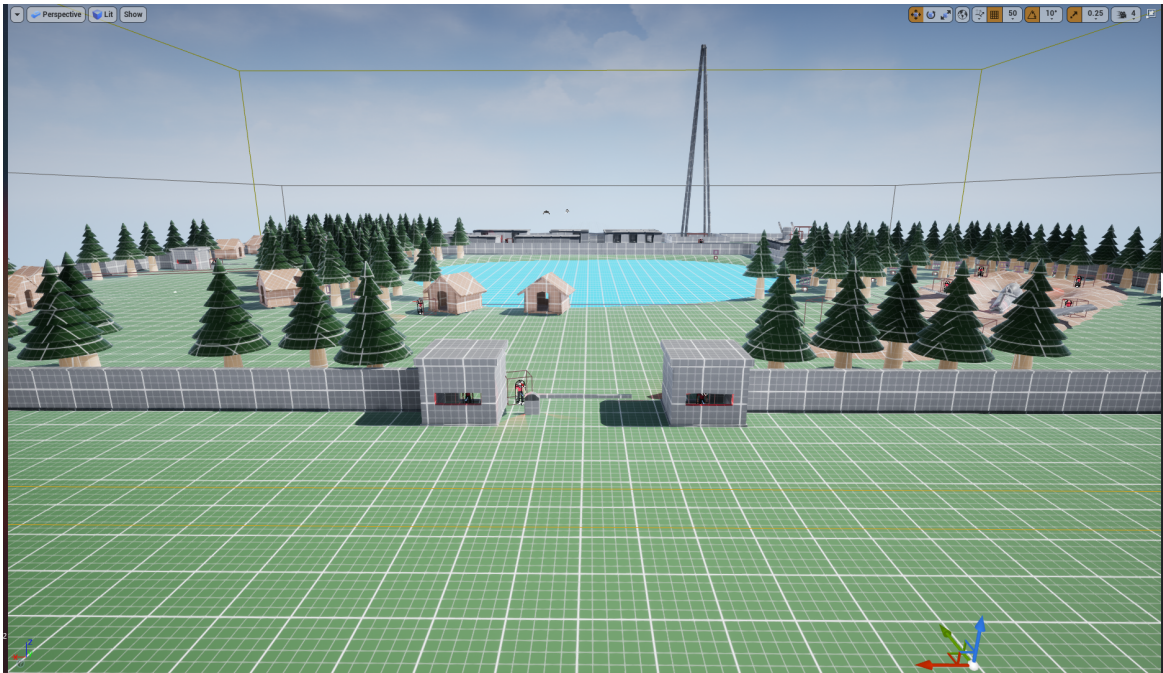
This is the entrance to level 2. From here, the player can clearly see the main objective of the level which is the radio tower.

Plane crash site:
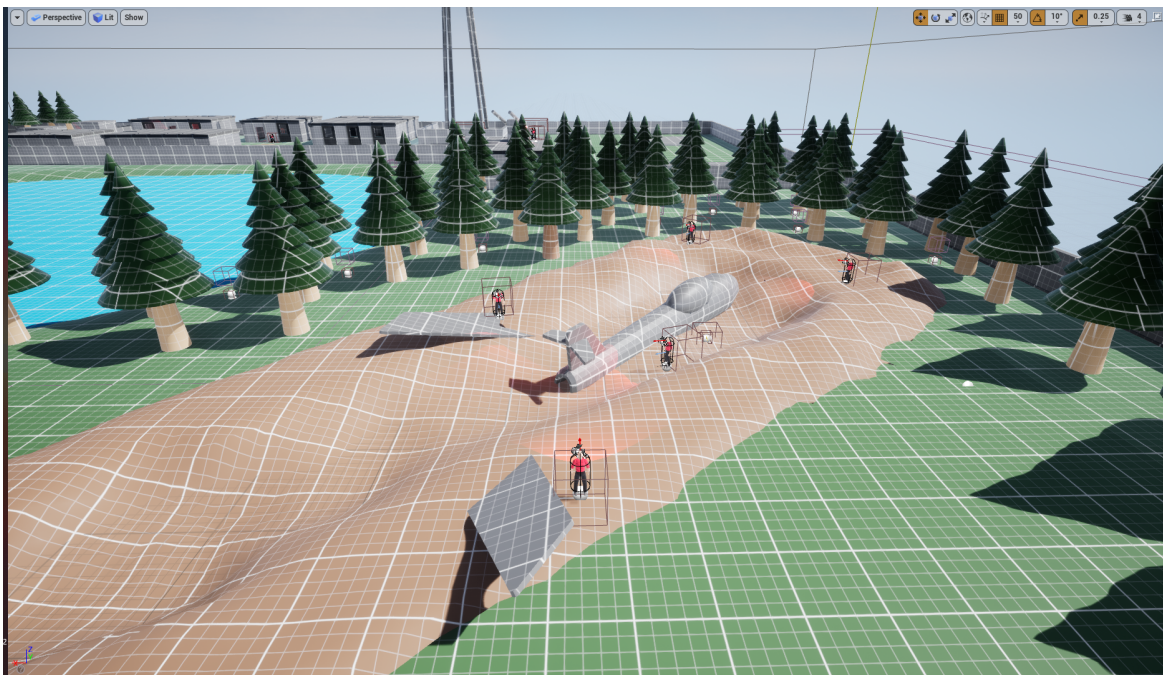
Above is one of the main story telling pieces of the level. The crashed plane is the plane on which the player arrived in the area and the player must receive their gear from it, including the assault rifle. The crash site is crawling with enemies who appear to be investigating the crash.

Mine field:
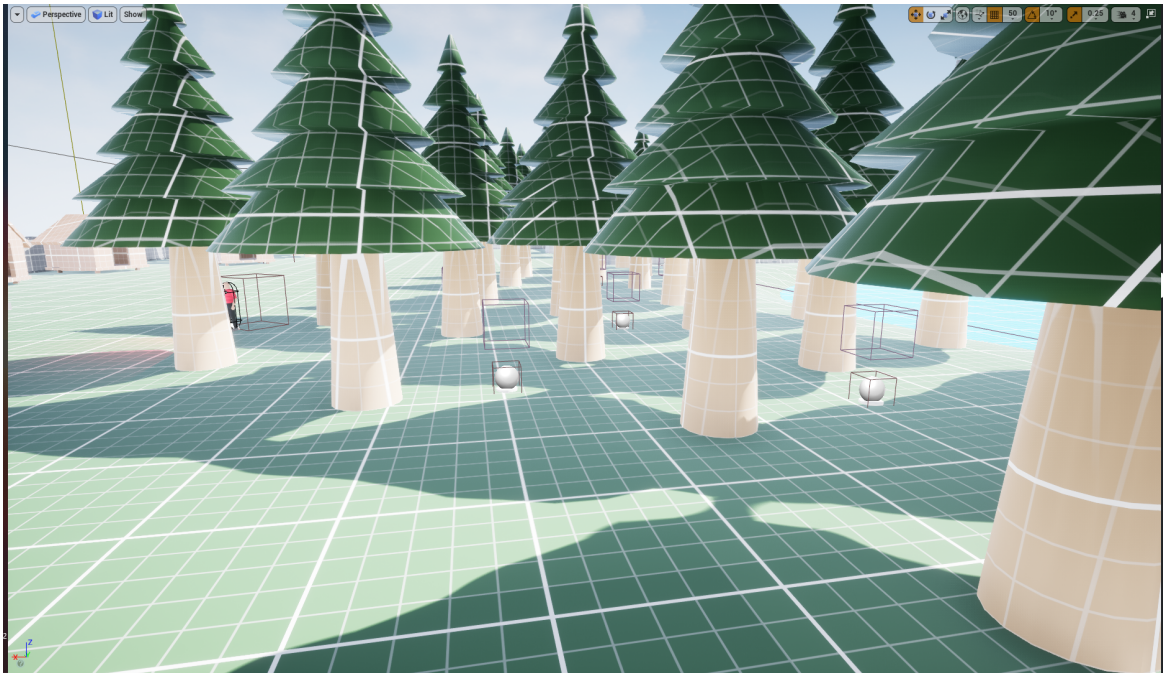
The minefield displayed above runs along the side of the path towards the enemy base. This minefield is intended to deter but not prevent the player from walking around the enemies along the main path. These mines will launch the player into the air and kill them instantly.

Entrance to enemy base:
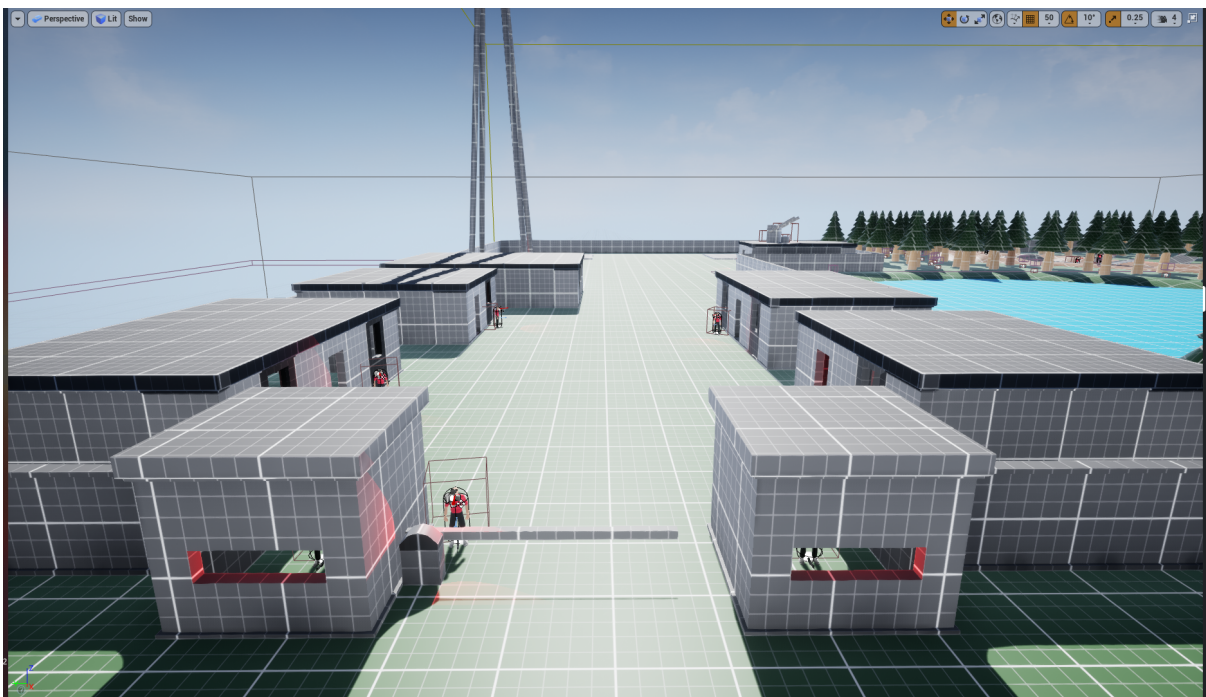
The main base contains a couple of buildings, all of which contain multiple enemies. This means that if the player chooses to attack the base head on with the assault rifle, all of the enemies will come running out to swarm the player. The player does also have the option to enter the base stealthily by using the silenced pistol to avoid alerting extra enemy units.

Anti-Air gun:
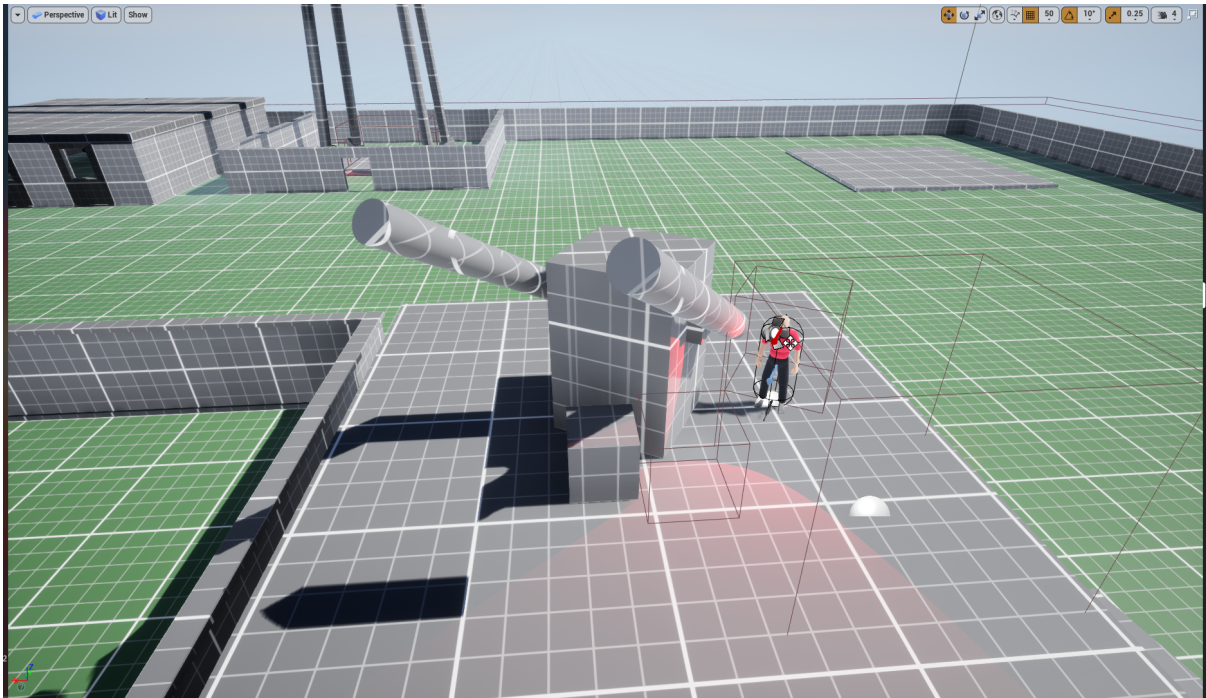
Here is the secondary objective of the level, the AA gun. This is another story element of the level as this is the gun that supposedly shot down your plane and is preventing back-up from arriving.

Radio Tower:
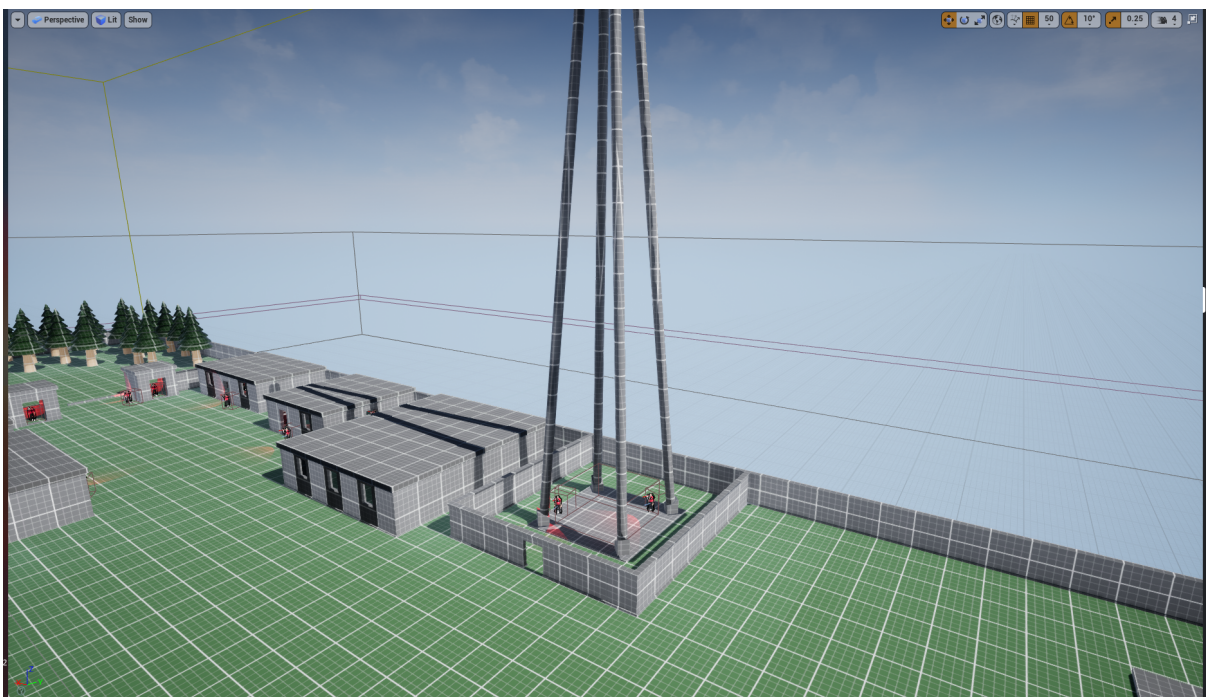
The radio tower is the final objective of the game, currently it is protected by two guards but the final version will have the player use the parkour mechanics to climb the tower and reach the objective.

Level 2 Feedback

The first question the playtesters were asked in the questionnaire addressed how they felt about the scenery within the level. Most of the group said that the scenery was nice and they could see what the level was trying to convey. However, a handful of people suggested that the level would be better if there was more blocking the empty path through the level and a bit of verticality would make the level feel much better to play.

The second question was regarding the enemy density within level 2. Most people found that the number of enemies was nearing the sweet spot however some areas could be adjusted in that the AI should have some patrol paths and be less out of the way so that the player cannot just walk past them without stealth. Also, some people found that the enemies with the base could be distributed better as they found themselves dying very frequently, however this could be due to the lack of ammo that needs to be adjusted.

The third question asked the playtesters whether the path throughout the level was clear to them. Some people mentioned the focal points that were being conveyed within the level such as the radio tower and the plane crash, however some stated that the plane crash was not as obvious from the entrance as it should be. This could be adjusted through the use of particle effects at the plane crash to create a plume of smoke to draw the player's eye like the tower. The layout of the entrance could also be adjusted to ensure that the player explores the plane crash before taking the path to the base. One playtester suggested using electrical poles to guide the player towards the plane crash whilst another suggested having a higher up area from which the player can view over the level and see key landmarks.

For the fourth question, the playtesters were asked how they felt about the length of the level. The majority stated that they found that it took them a reasonable amount of time to complete. For the few that said it was too short, this could be adjusted through verticality and adjusting the layout of the paths through the level.

The fifth question asked about any problems that the playtesters may have encountered during the session. Nearly everyone had an issue with the mines and the respawn points. These need to be adjusted for the final iteration.

Finally, the playtesters were asked for any other suggestions that they might have for the level. The list of suggestions included:
- The addition of stealth grass throughout the second level and more of an option for stealth overall. The grass could also be used to hide the mines within the minefield.
- More ammo pickups but not too many because the scarcity of the ammo made the level more fun.
- Interactions and meshes for the objectives so that it is clear to the player what each objective is.
- The potential addition of health kits for the player to regain health throughout the level.
- Enemy patrols.
- Warning signs for both the minefields and the water. Maybe the use of a mesh to show that the water is toxic e.g dumped barrels and floating corpses. Feedback on deaths caused by both of these things.

- More verticality and detail to each area.
- Routes through buildings e.g climbable windows or vents.
- Pace the difficulty throughout the level better. Too many enemies at the beginning and it should scale up from there towards the end.
- Showcase the plane crash at the beginning though a cutscene or use audio to explain the plane crash.

Things to Add or Change in the Second Iteration

- Add grass to all areas of the map and add a wider availability for stealth throughout the level as a whole. Use grass to hide mines.
- Add ammo pickups throughout the map in areas where ammo will be needed more.
- Add meshes for objectives to make them more clear to the player.
- Create a health kit mesh and add health pickups for the player.
- Add enemy patrols.
- Create a sign mesh and a barrel mesh for indicators of potential kill zones like the minefield and the lake.
- Adjust mines and lake with feedback to the player so that they understand why they are dying.
- Adjust the layout of the level to incorporate more verticality and draw the players attention to the plane crash at the beginning of the level.
- Adjust the pacing of the difficulty as the level progresses.
- Add a cutscene showcasing the plane crash.
- Add more meshes for cover points and other path blocking objects such as vehicles.
- Adjust checkpoints so that players are actually able to get them and also not spawn under the map.
- Add particle effects to the plane crash like a plume of smoke to better draw the players eye.
- Adjust the mines and ensure that they kill the player every time instead of acting like jump pads.
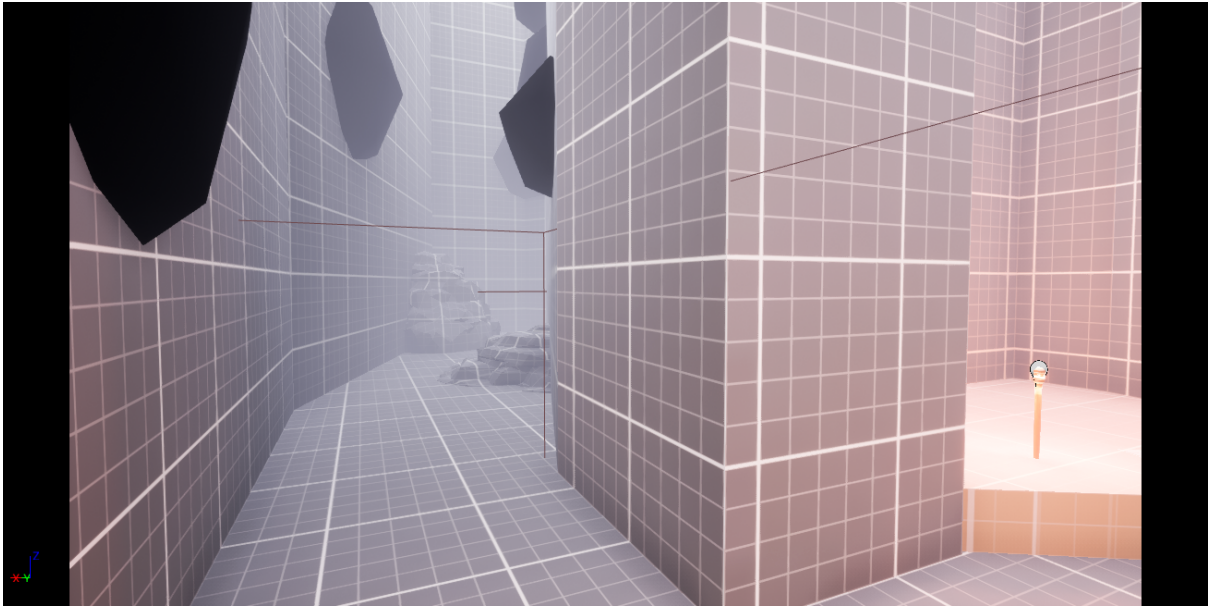
Second Iteration
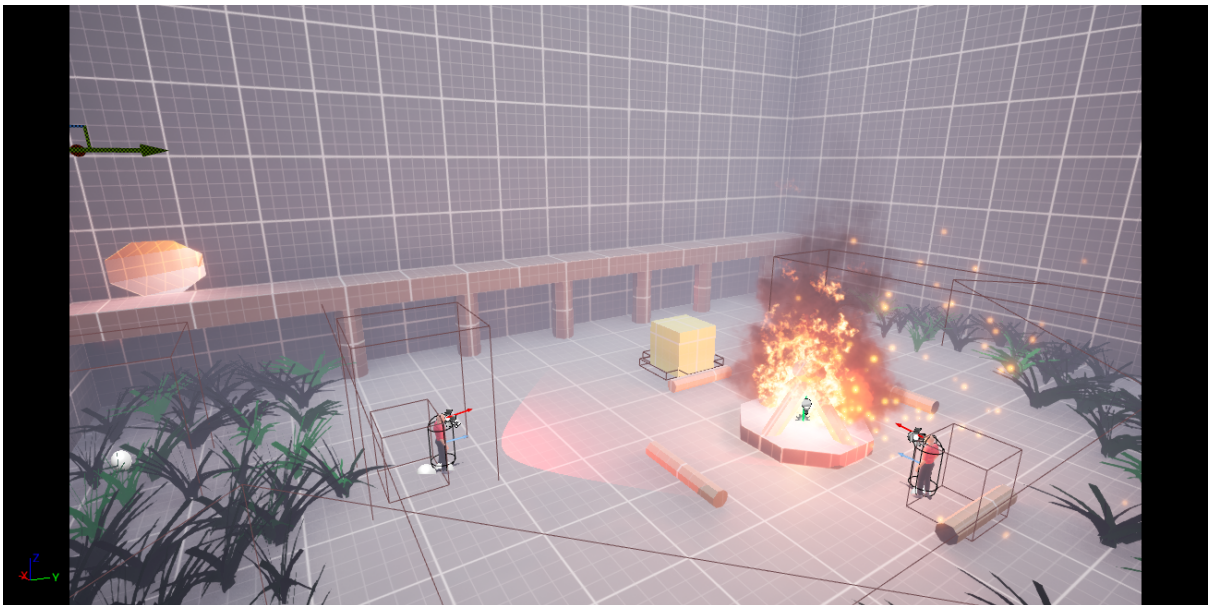
Level 1

Basic Movement Area:
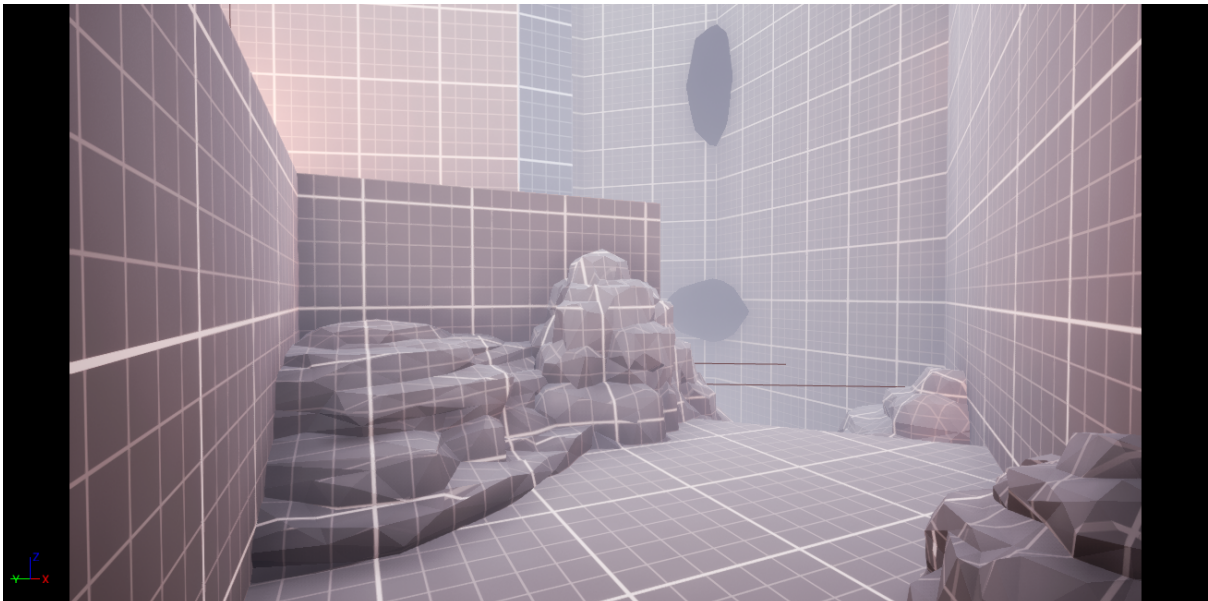
Running and crouching Area:

The Running and crouching area was kept mostly the same but the text on the wall was removed and a map of the second level was added to a decal on the right of the screenshot on a table.

Enemy Stealth Area:

The area where the player first encounters enemies has had the stealth areas expanded, a new walkway to climb up to to advance, and an extra enemy to watch out for that patrols the area.

Loot Area (old alternate route):
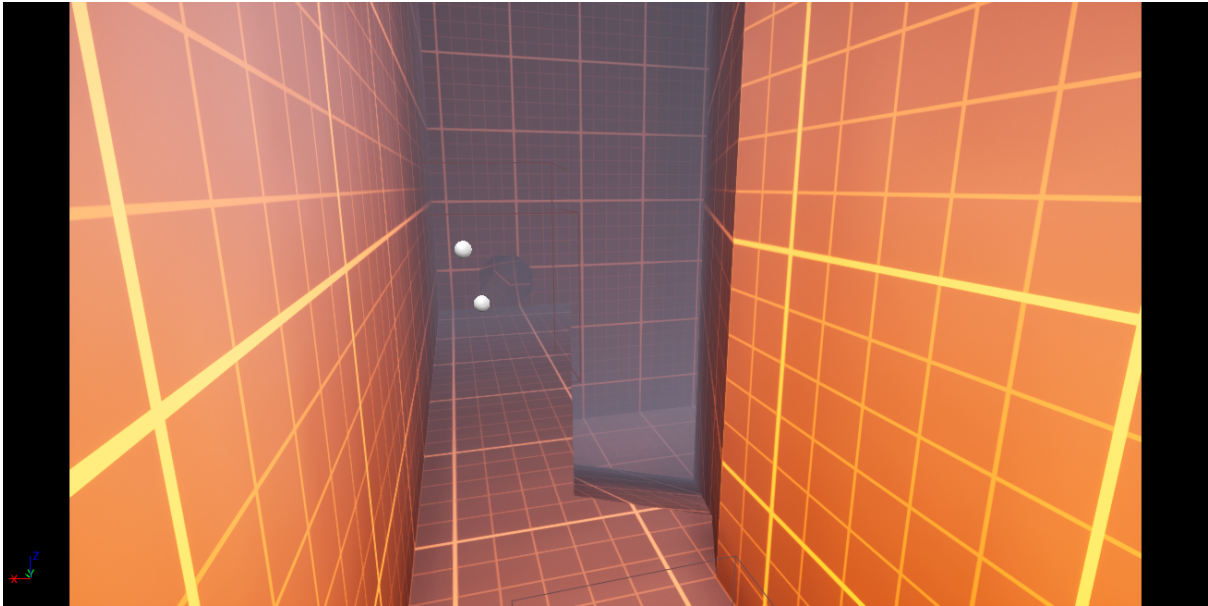
This area has had a gun added to it for the player to pick up before advancing along with a prompt telling them how to equip it.

Cave Shoot Area / Level Exit:

This is the final area before the player moves on to level 2. This area was brand new for the second iteration and it has two purposes. One is to give the player a chance to learn how to use the gun they just picked up in the previous "loot" area and the second is to test them on everything they have learnt throughout the rest of the level by giving them enemies to fight and sneak behind and giving them parkour challenges with pushable boxes to be able to move on and enter the second level.

Level 2

The first thing that was adjusted for the second iteration of level 2 was the mines. By changing the killbox, players now die everytime that they walk over the mines and there is no

longer a phantom vault when players attempt to jump over them. Jumping over mines now works as intended.

**New entrance to level 2, Mountainside:**
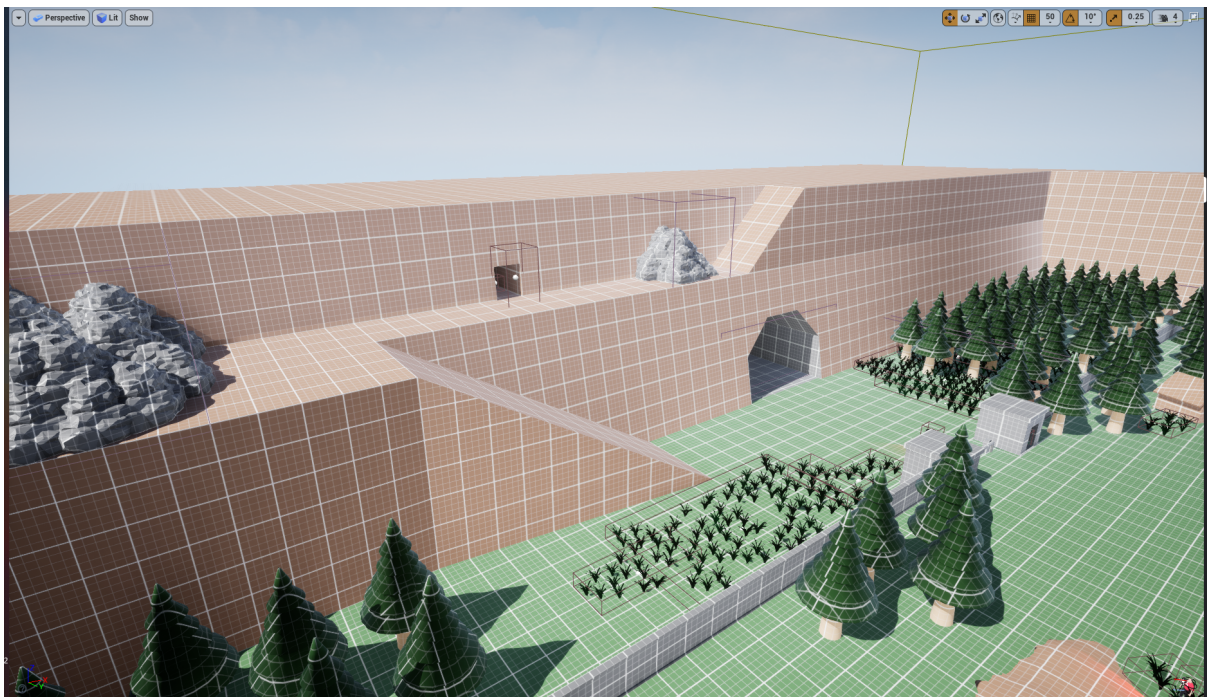
Above is the next edit made to the level from the feedback received. A mountainside has been added to give some verticality to the level, the height that the player starts from also provides a better overlook into the level from which the player can spot all key points.

Update plane crash site:
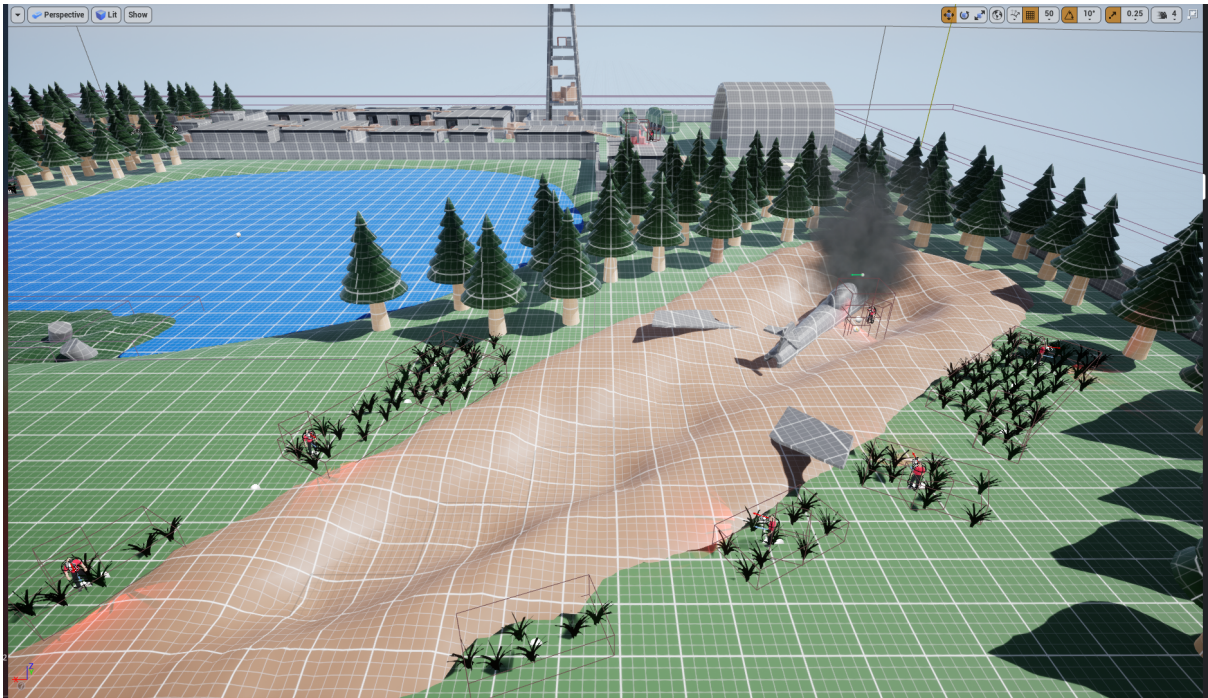
The crash site has also been edited with smoke to better indicate what it is from afar and also provide a bit more atmosphere to the level. The surrounding enemy set up has also been improved with grass and stealth volumes for the player to hide in and also a better enemy layout with patrols.

Updated entrance to the compound:
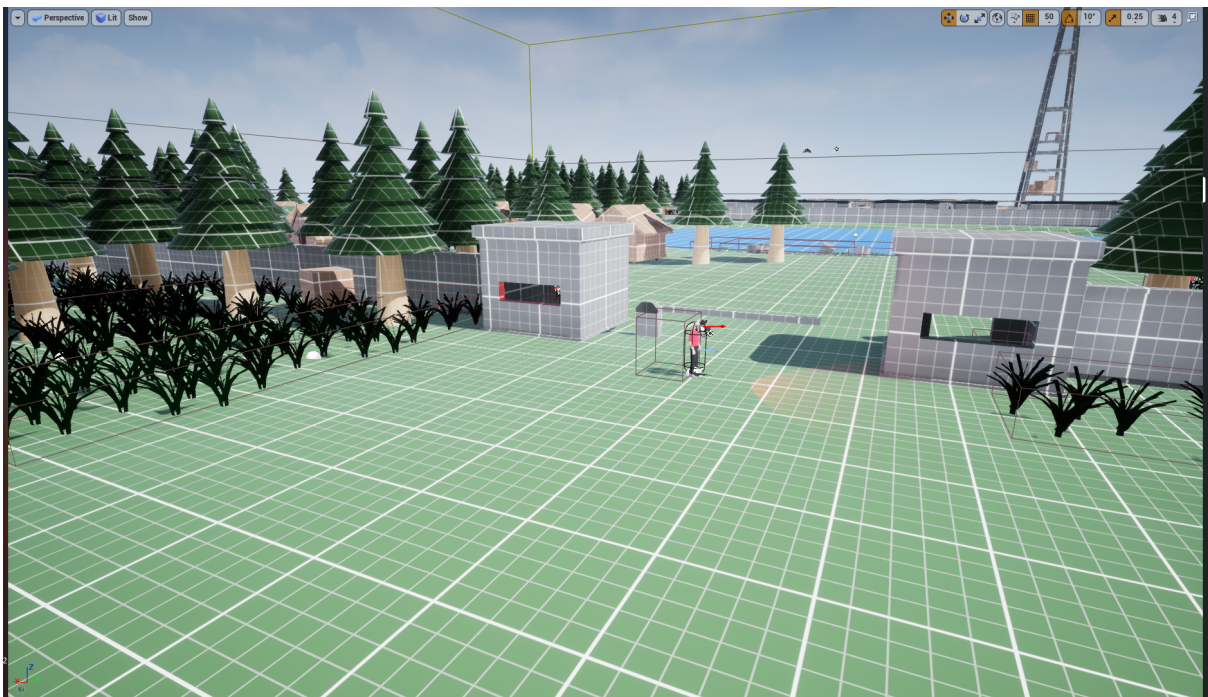
The entrance to the level has been improved by adding stealth volumes and grass, reducing the number of enemies (as requested through feedback) and also adding a box that the player can use to vault over the wall on the left side so that the enemies can be entirely avoided.

Ammo pickups:
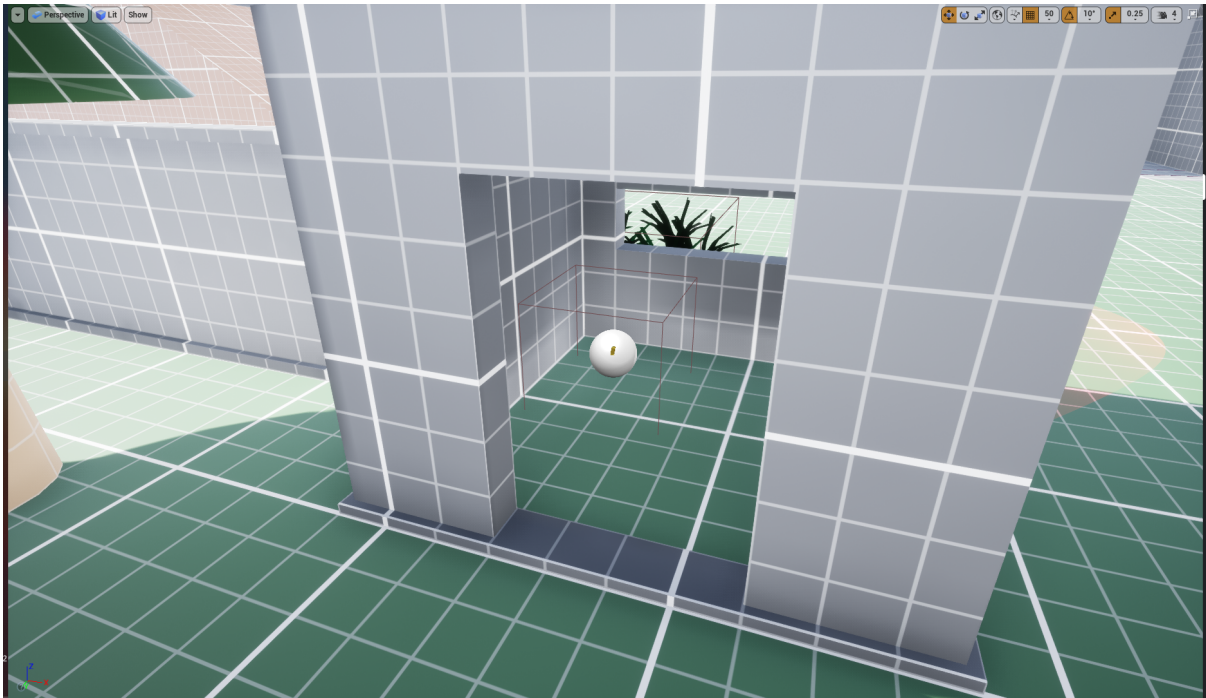
A pistol ammo pickup has also been added to one of the pillboxes in the entrance as playtesters found that they ran out of ammo fairly quickly and were expecting to find ammo pickups throughout the level.

Toxic waste in lake:
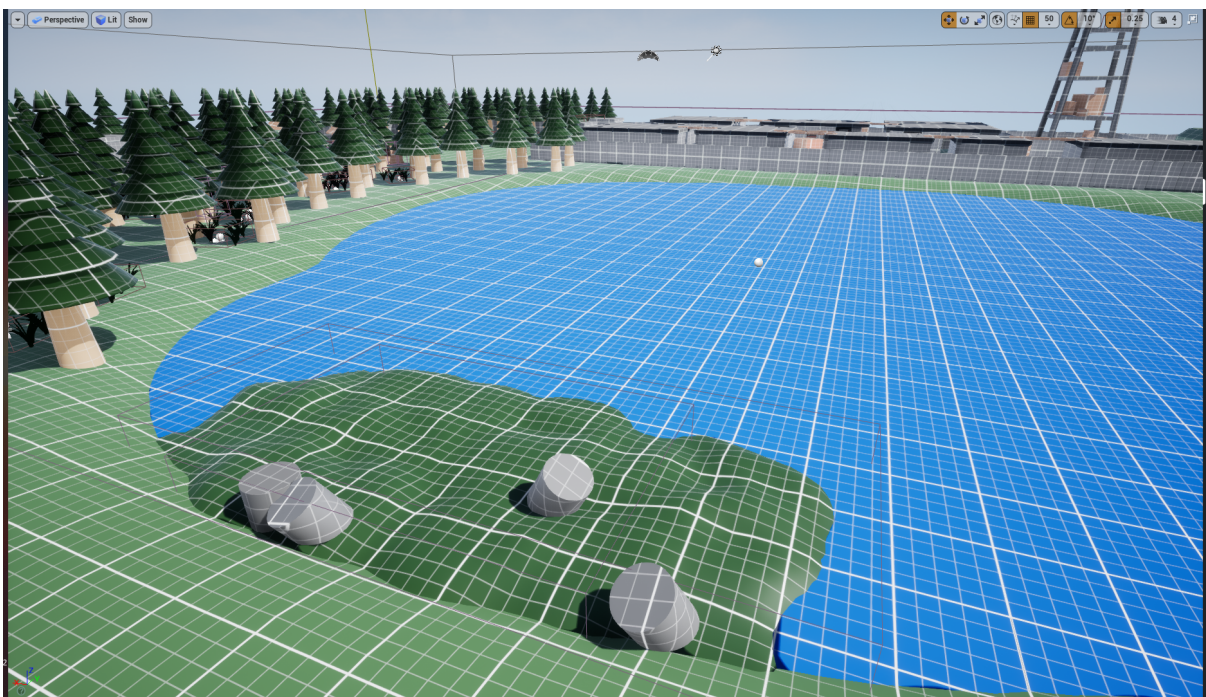
The next thing that was added was a toxic waste spill into the lake to provide explanation to its damaging effects and deter players from attempting to walk through it.

### Narrower path towards final base:
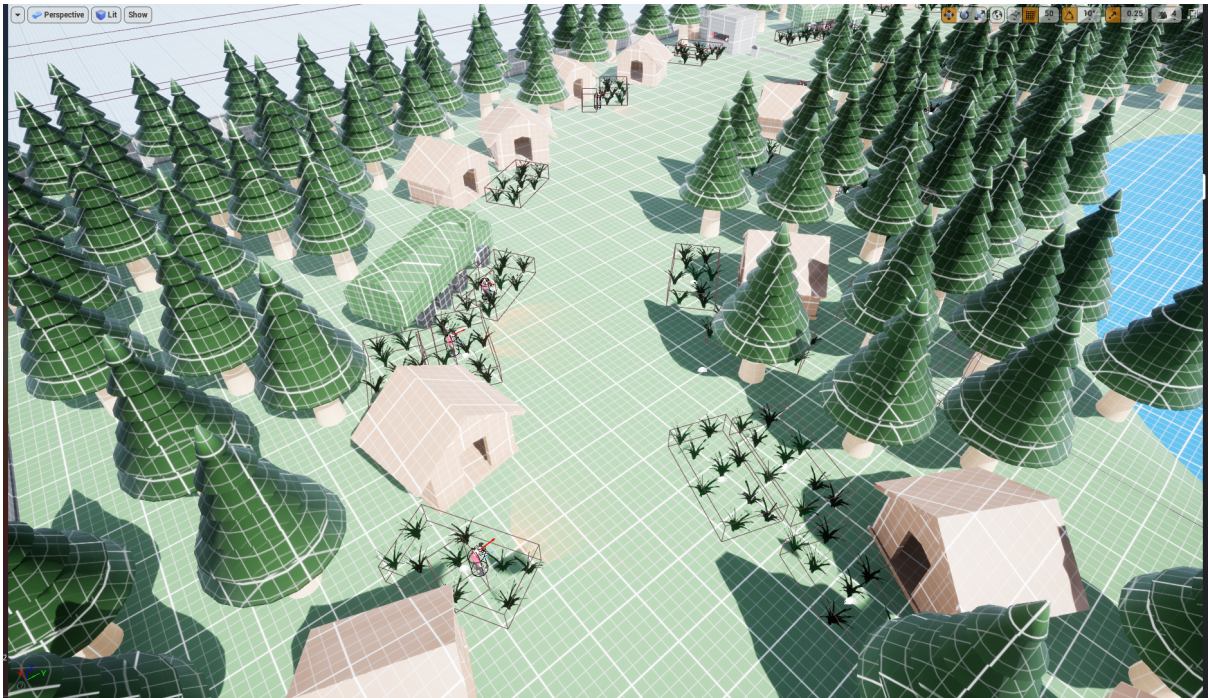
The route towards the main base has been made narrower as playtesters found that they could just run through this area without any enemy detection. Now, the path should be tight enough for the enemies to spot the player running through the path. Dedicated patrol paths have also been set up along this route to add more life to the enemies.

More ammo pickups:
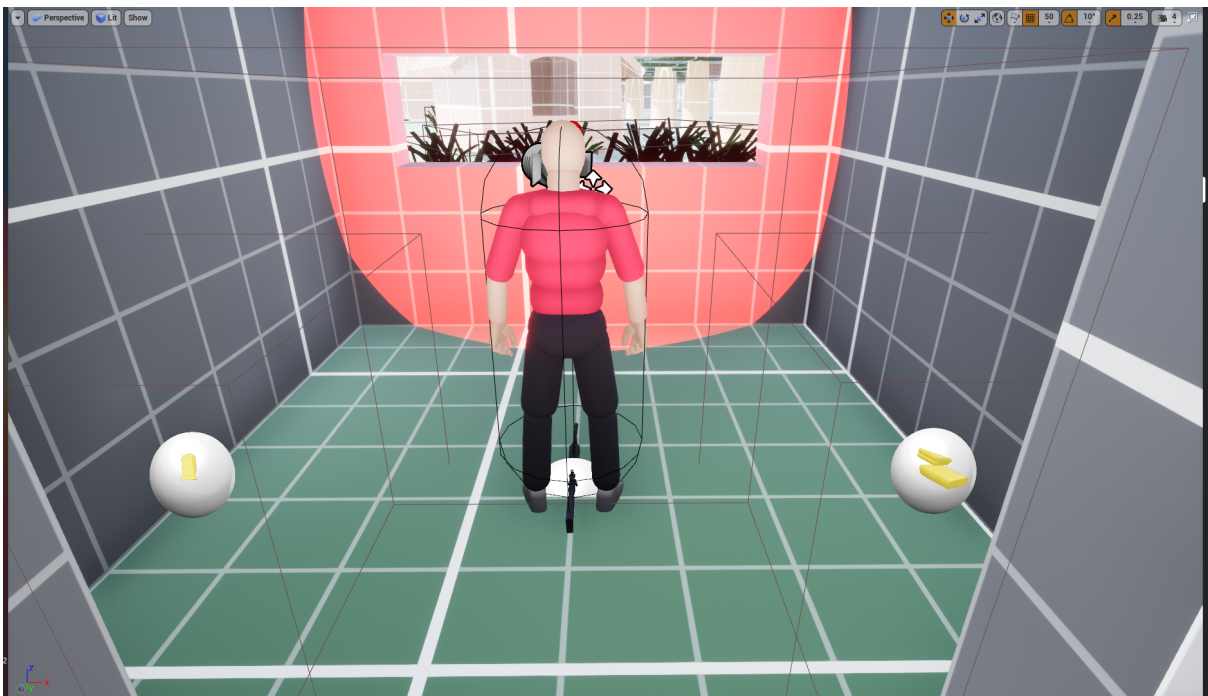
More ammo was also added into the pillbox along the route to the main base, this time including assault rifle ammo as well as pistol ammo. This is because the player is approaching the area of the level with the highest enemy density and they could get overrun very quickly without lots of ammo.

Entrance to enemy base:
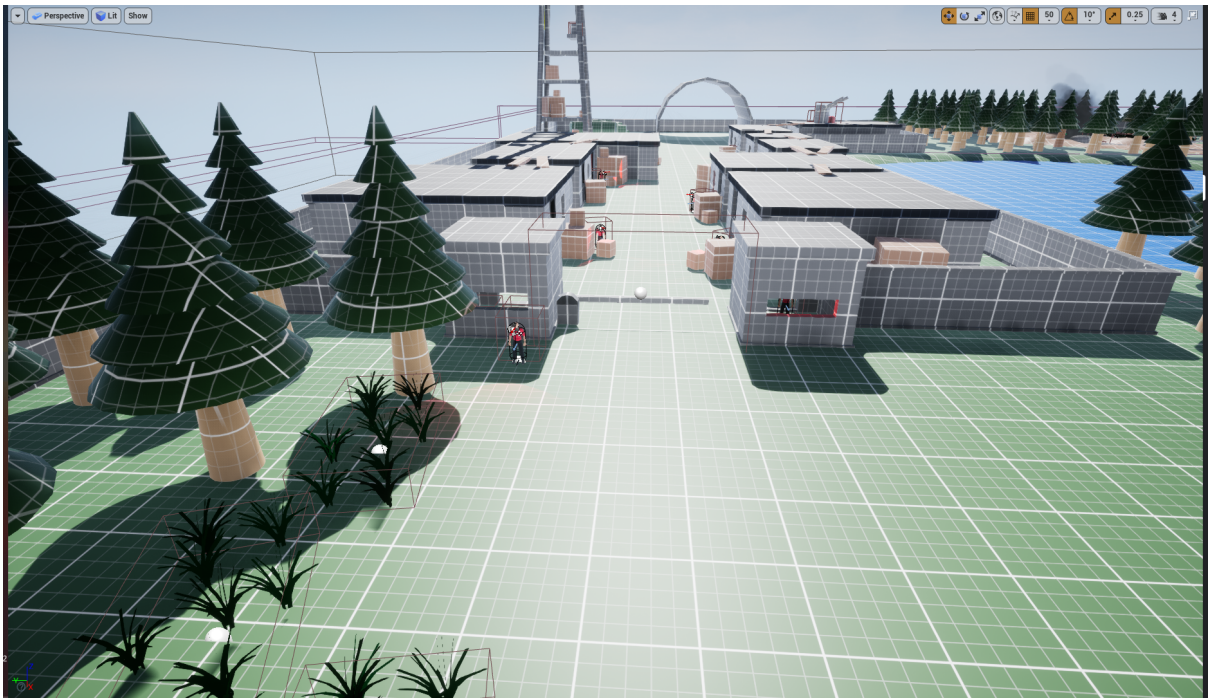
The entrance to the main base has been adjusted with the inclusion of more trees, more stealth grass and an enemy patrolling around the front of the base. The left pillbox also has even more ammo for the player to pick up.

Updated base layout:
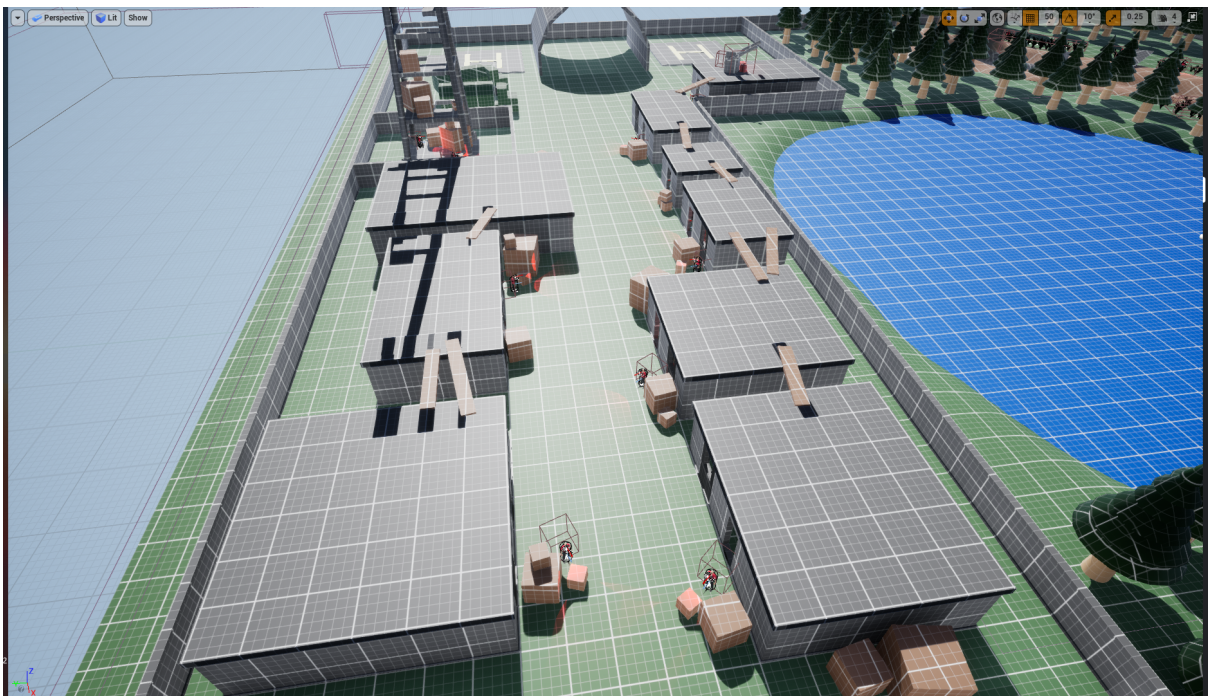
The base layout has been drastically changed. All of the buildings have been adjusted so that the route through the middle is not wide enough that enemies wont spot the player running through. Boxes have also been added so that the player can opt to use them as cover or so that they can climb up onto the buildings and traverse over the planks to stealth
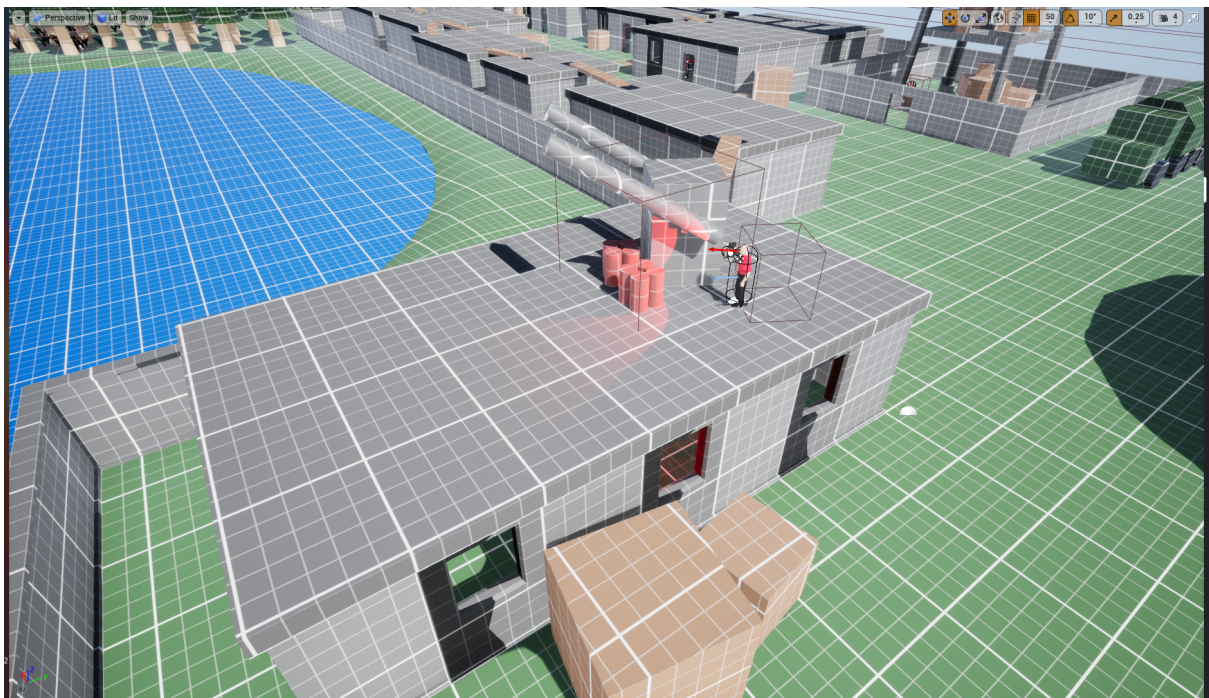
past all of the enemies. The buildings still remain full with enemy units so that if the player chooses to use the assault rifle, they will alert all of the guards in the area.

Hangar, trucks and landing pads:
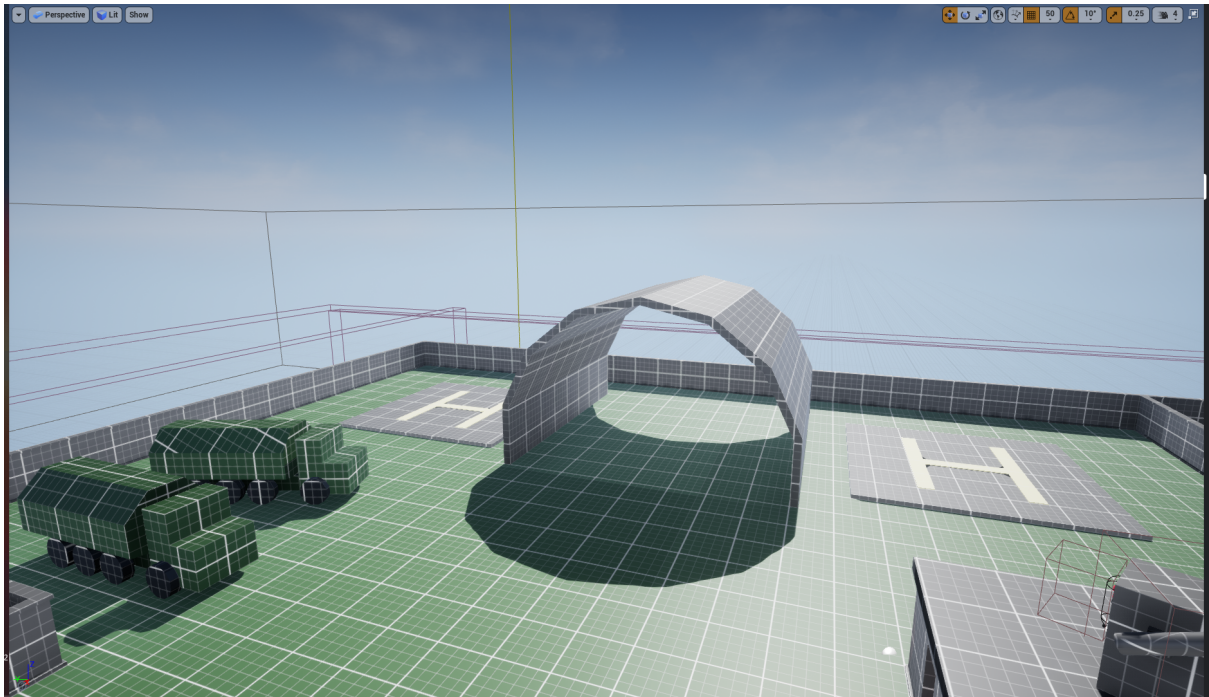
The other side of the base has received some more props and style to make this area look less empty and unused.

Updated Anti-Air gun:

The AA turret area has also received some minor adjustments with the box colours being changed to match the rest and also the explosives being changed to better resemble explosives.

Improved radio tower:

Finally, the radio tower has received a much needed adjustment with the inclusion of parkour elements. This means that the player has to use the climbing mechanics that are included with the advanced locomotion package in order to reach the final objective of the level.

Summary

Level 1

In summary, there were a couple of major changes and several more minor changes to level 1 across its lifespan.

Firstly, all wall text was removed from the level to increase immersion. This was replaced with prompts that would appear on the player UI telling them the basic controls but giving them much less information than the wall text did. This was so that they could learn by doing rather than learning what to do by being told exactly what to do and where to go.

Secondly, the alternate route was re-purposed to be part of the main route that the player would take. This was done as in the playtest players got confused as to where they were supposed to go as they would sometimes go back on themselves.

Finally, a brand new section on top of the original node diagram was added to give the players a place to learn how to shoot and test themselves after they have learnt all the mechanics from the previous section of the level. This area was added because players felt they didn't have much to do in the level so giving them a place to test out the mechanics felt appropriate.

Level 2

In summary, there were several major changes to level 2 across its lifespan.

Firstly, the beginning of the level was originally going to involve the player arising from a cave at ground level from which the radio tower could be seen in the distance. This was changed for the second iteration by adding a cliff face and a cave that upon exiting, the player can spot all of the major objectives of the level and see the majority of everything else. This meant that the player could see the plane crash from the beginning and they could highlight it as a key point of interest to acquire the assault rifle.

Secondly, the addition of stealth volumes, grass and narrowing the main route to the base. The addition of grass and stealth volumes opened up more options for the player and added a much better sense of atmosphere to the level. It also meant that more things introduced in level 1 were recycled for level 2. Narrowing the main route to the base also improved the feel of the path and allowed enemies along that path to spot you, instead of being able to walk just outside of their site line.

Finally, the edits made to the enemy base made it feel much more alive and less empty. The base area was intended to be full of enemies but with the option of avoiding them if the player chose to. Paths were added over the tops of buildings so that players could explore the stealth route further and avoid any large enemy encounters. The radio tower was also improved by adding parkour elements and forcing the player to climb to the top of the tower in order to complete the final objective.