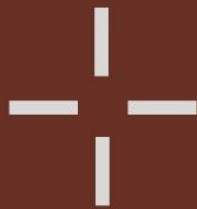


GUN FOR COVER

**A RETRO FPS LEVEL BY
LAUREN PEARCE**



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High Level Design Overview

USPs

Heavy emphasis on
environmental awareness
to stay alive

Bullet hell arena

Customisable chaos –
players can often see the
danger before they face it,
so can choose to avoid, or
strategize etc

Revenge

Objectives

Design objectives:

- Let the player have decisions in their approaches to encounters.
- Reward the player.
- Make the areas feel unique both in visuals and gameplay.
- To take away player power then give it back at crucial moments to give them a heightened sense of satisfaction.
- To make cover in the game a valid choice and to mitigate fight's difficulties.
- A variety of enemy encounter scenarios and pairings for dynamic combat situations.
- Offer the illusion of choice.
- Add elements of surprise.
- Environmental detailing that alludes to a narrative.
- Add design patterns so players subconsciously follow them.

Player's objectives:

- Venture to the rooms seen through the glass.
- Gain more ammo and powerful weapons.
- Survive the chaos.
- Defeat the Final Boss and escape.
- Find secrets (sub-paths and a story room) throughout the level.

Design Motivations and inspirations

Strife's Lived in Levels-



Whilst Gun for Cover is not populated with people as Strife is, I took inspiration from the underlying feeling that it was lived in at some point in time.

Despite the initial isolation from the level, I wanted the visual utilization of the level, that the laboratory signals, to allude to it once being inhabited. This could give any player who enjoys role playing or narrative, more to fight towards, seeking answers for closure or to roleplay as the hero.



Boss rooms from Strife (Oracle Boss fight) and Doom

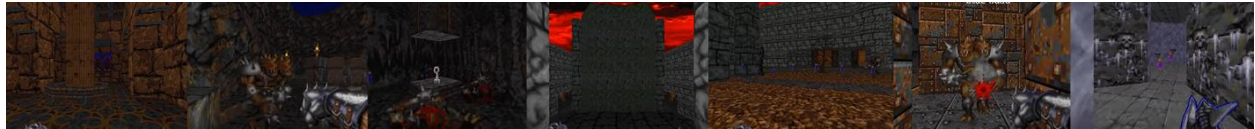
Boss fight areas in these games often offer a larger space to use their abilities putting an emphasis on maneuverability and constant movement. The games often follow a structure of pushing players through tight spaces, only to open to tougher areas. However, boss areas utilize this formula to the maximum by haven't much more

exaggerated scale to convey to the player the power and challenge the enemy holds in comparison to the constant micro-aggressions from other enemies.

Metro 2033's Enemy reencounter satisfaction

Encounters are challenging at first and whilst surviving is satisfying, so is gaining power, and later killing them with ease. I took inspiration from these:

Hexen's area diversity



*Images from the first 20 minutes of gameplay

Despite Gun For Cover being significantly smaller, I was inspired by Hexen's area diversity. As in such a short span of time it quickly introduces player to visually unique areas, either through their shape, height, or textures etc. This makes traversal less monotonous and creates the illusion that the limited world is more expansive than it is.



Key Elements

-Main goal visible from start to act as the driving motivation for the player and to add subconscious directionality into player's decisions.

-Secret loot rooms and areas of calm peering out to areas of intensity to give the players a sense of reward

-Light to guide the player towards pickups, so as the level progresses, they subconsciously run towards lights, and it becomes part of their gameplay pattern

-Key objectives and areas viewable from glass



Expected Player Experience

-Player's feel consistently challenges and in areas of higher intensity, recognize they can run and flee to the next area

-The player grounds themselves and strategizes via looking through windows to the next area/available route

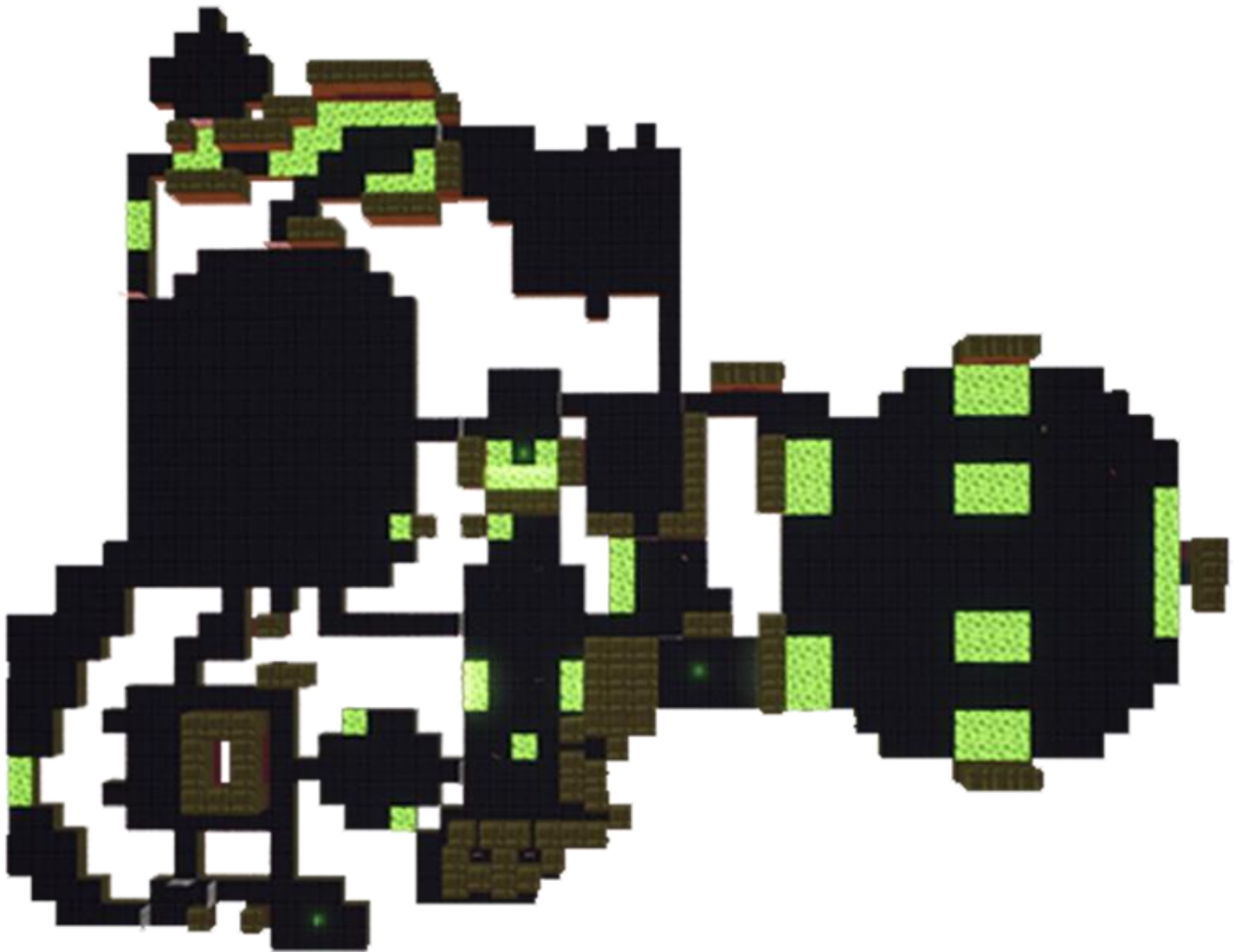
-Areas of intensity are often followed by areas of calm to consistently reward the player from the contrast of difficulty cementing that the challenge has been won

-If replayed, they can find an alternative paths and playstyles that allow them to experience the level in new ways

-Checkpoints are of suitable quantity and reward the player. Their number is not so great, it decreases difficulty and makes dying less consequential. Furthermore, not so small the difficulty increases and amount of backtracking a player must complete.

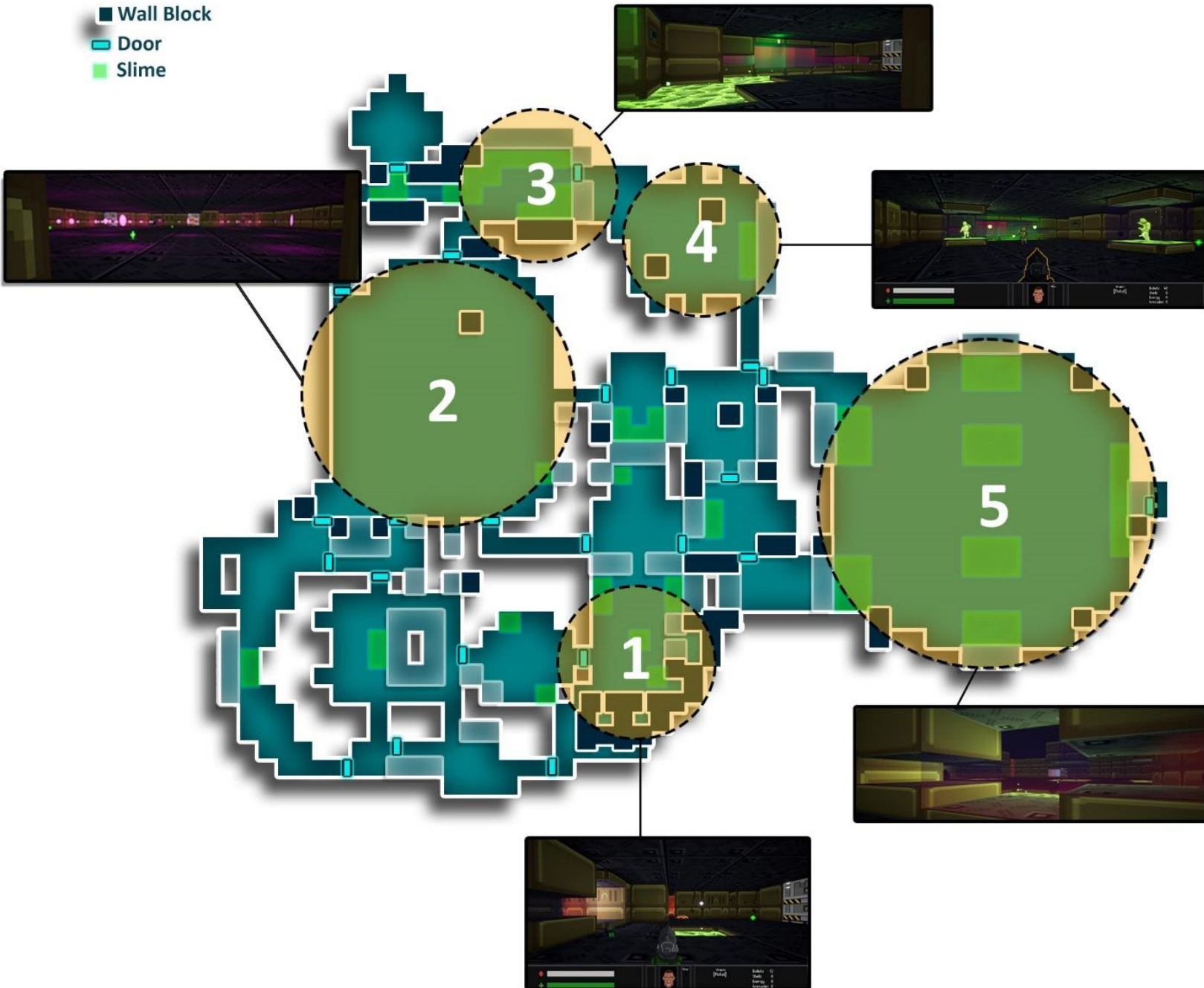
-Points of interest, such as the lookout room and laboratory, make for a more memorable experience and make each room visually unique, so it is easier to gather their bearings

Overview Map



Points of Interest

- Glass block
- Wall Block
- Door
- Slime



Point of interest number	Description
1	Crab Corridor – crabs shoot long range attacks through small slits in the wall, potentially catching the player off guard. This forces a shift in tactics and gameplay, with the player pushing towards a certain point with slow precision.
2	Bullet hell arena – players can test their might or their strength to survive. The difficulty for some may feel insurmountable, so surviving can act as reward enough, yet for skilled players, they may push through and defeat all enemies in this area. Furthermore, the intensity of this area should make the calm transition room more rewarding.
3	A calm transition room after the intense battle, where they can admire the vast sunset through a tall window and watch illuminated bubbles rise
4	Laboratory – this room acts as both the narrative trigger and continuation of the game's intensity. It insinuates that the enemies manmade so therefore not naturally existing.
5	The final boss room which also acts as the narrative closure. The tall ceiling and large open space should signal to the player that this area is dangerous, and that maneuverability will be beneficial in staying alive.

Aesthetic

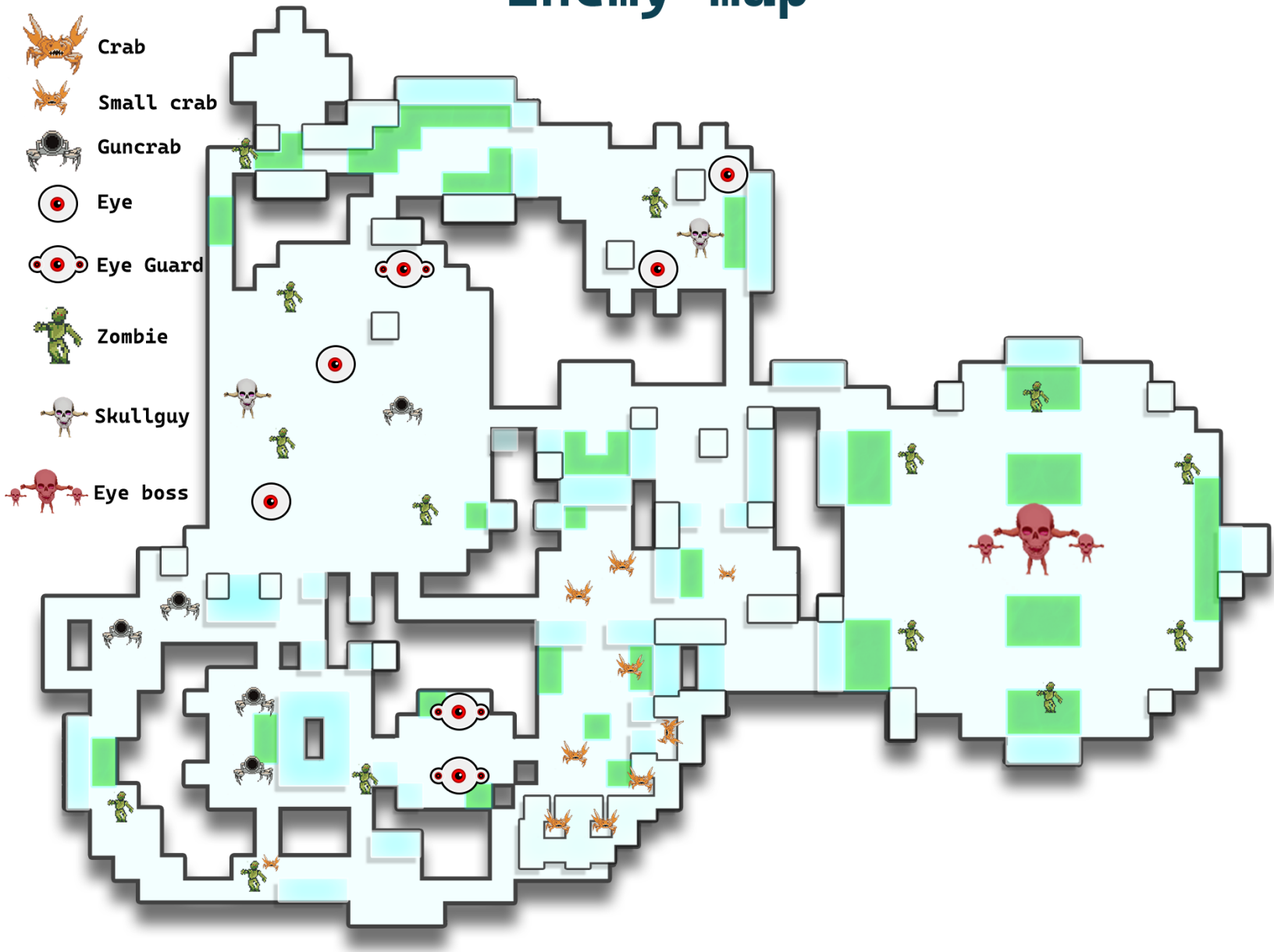


Gun for Cover takes inspiration from both classic FPS game and modern revivals of the genre, often referred to as "Boomer Shooters". Whilst the Peril framework may be limited compared to modern Retro FPS revival, in its geometric structure, with inability to form slopes, the commonalities stem from usage of colours and patterns to push the player into new areas, to signal danger and to create contrast.

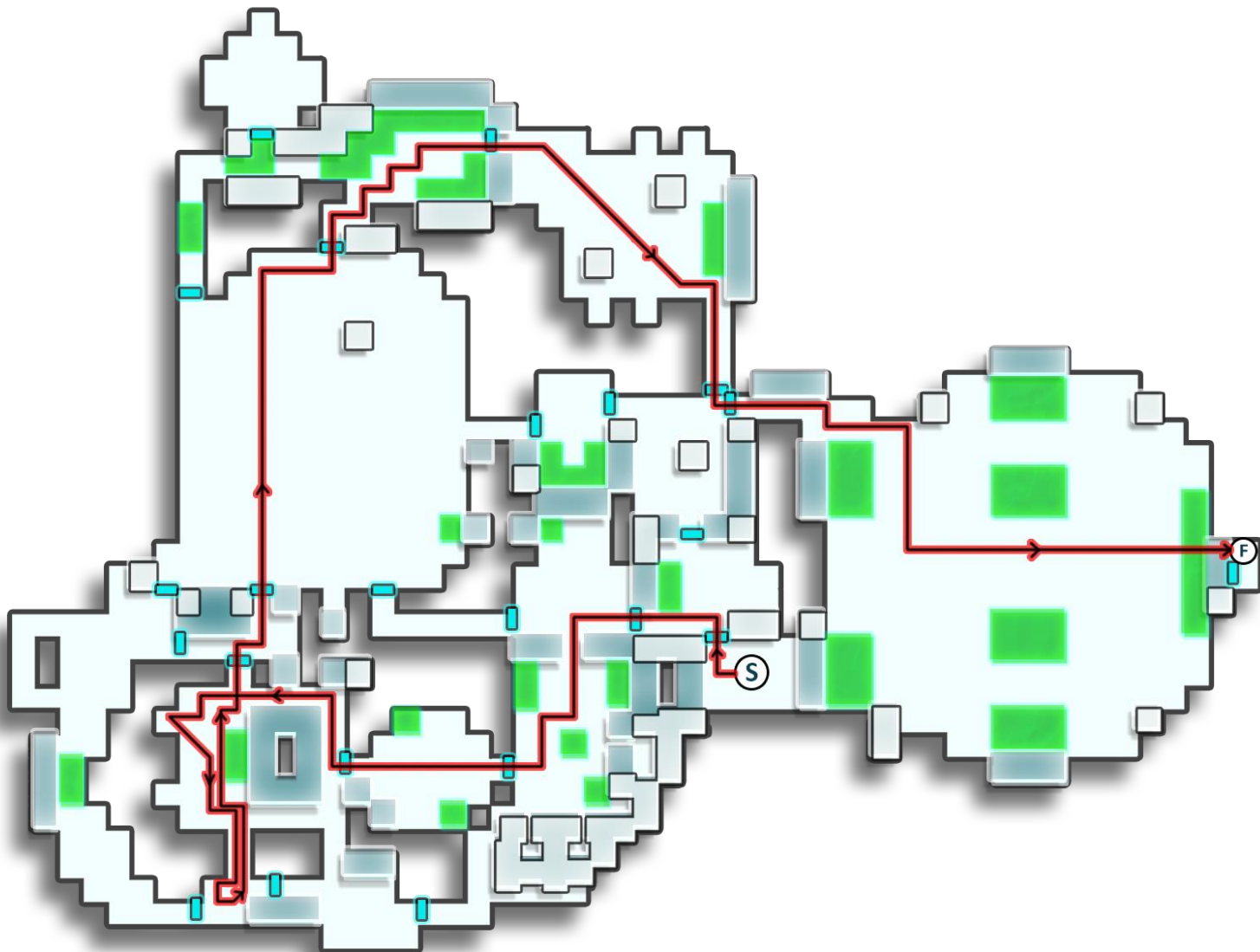
Bold and vibrant colours like in the moodboard have been used throughout the level as signifiers and to guide the player and calmer more neutral colours for transitional areas.

Enemy Placement Map

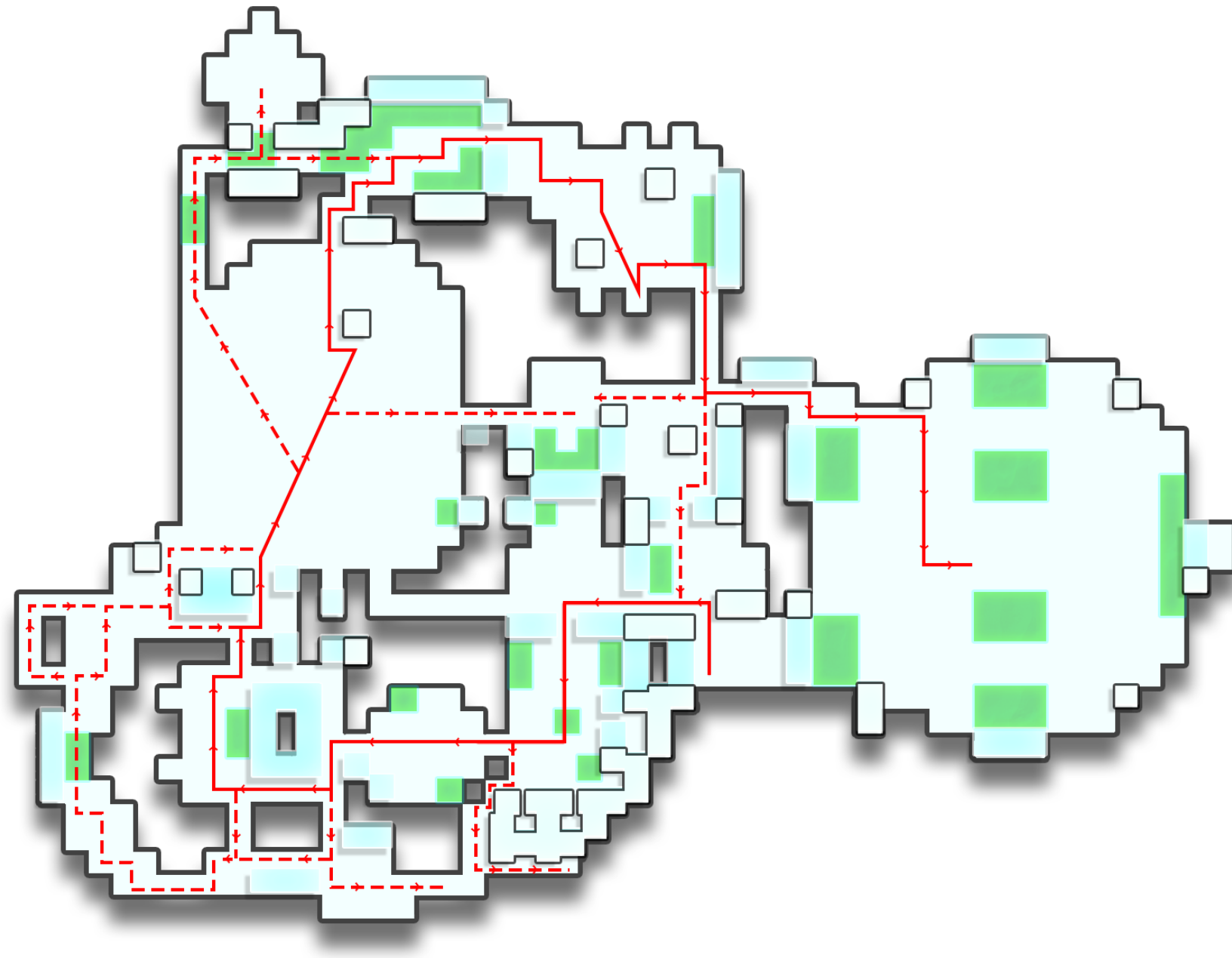
Enemy map



Critical Path



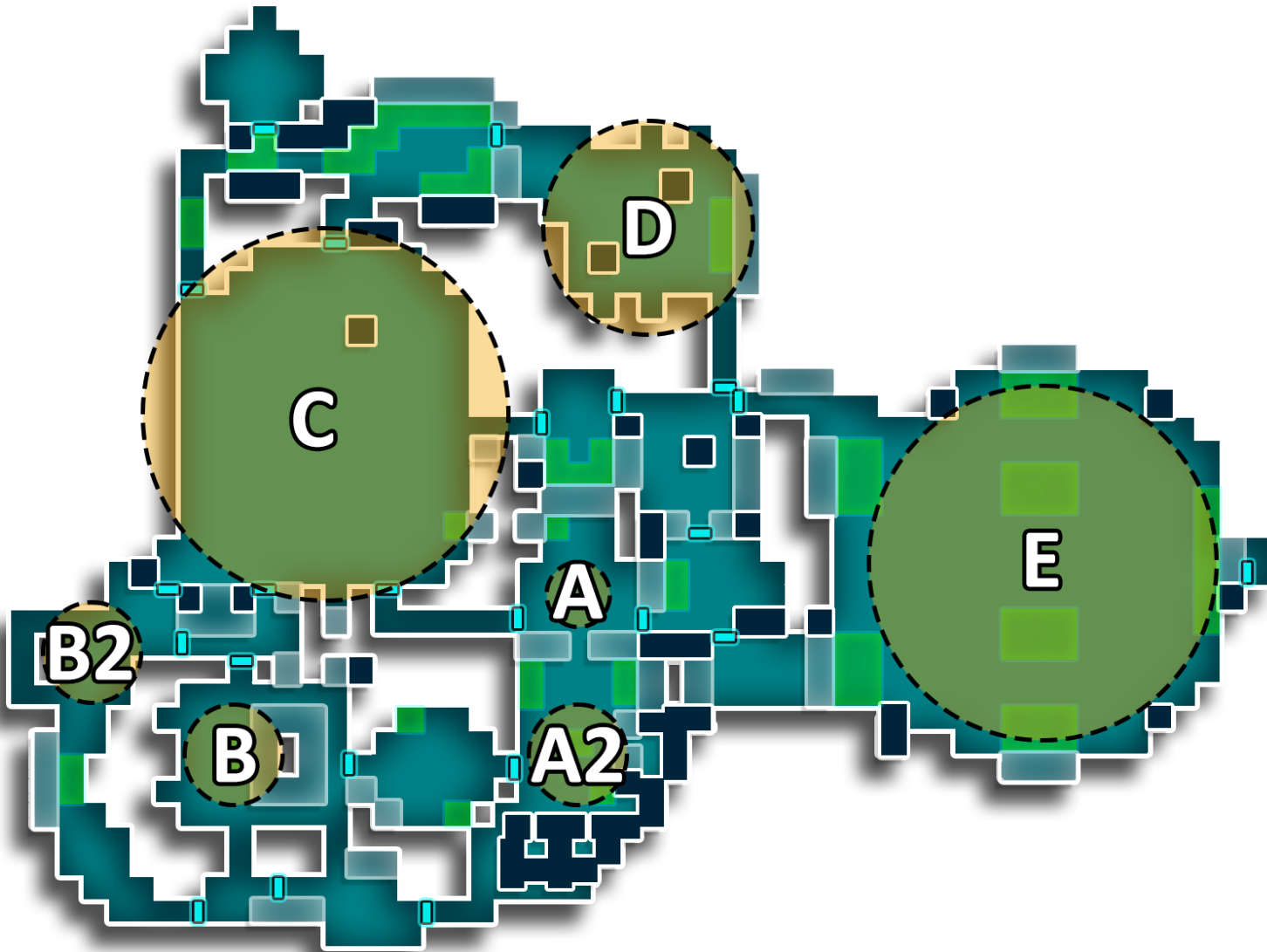
Additional route opportunities



The red dotted lines represent paths that diverge from the critical path. This map features plenty of locked doors, which interconnect previously explored areas to current ones, so that the player can backtrack if they feel they have missed something (usually if they have seen a pickup through the glass or feel unprepared for a fight up ahead).

Conflict points

-  Glass block
-  Wall Block
-  Door
-  Slime

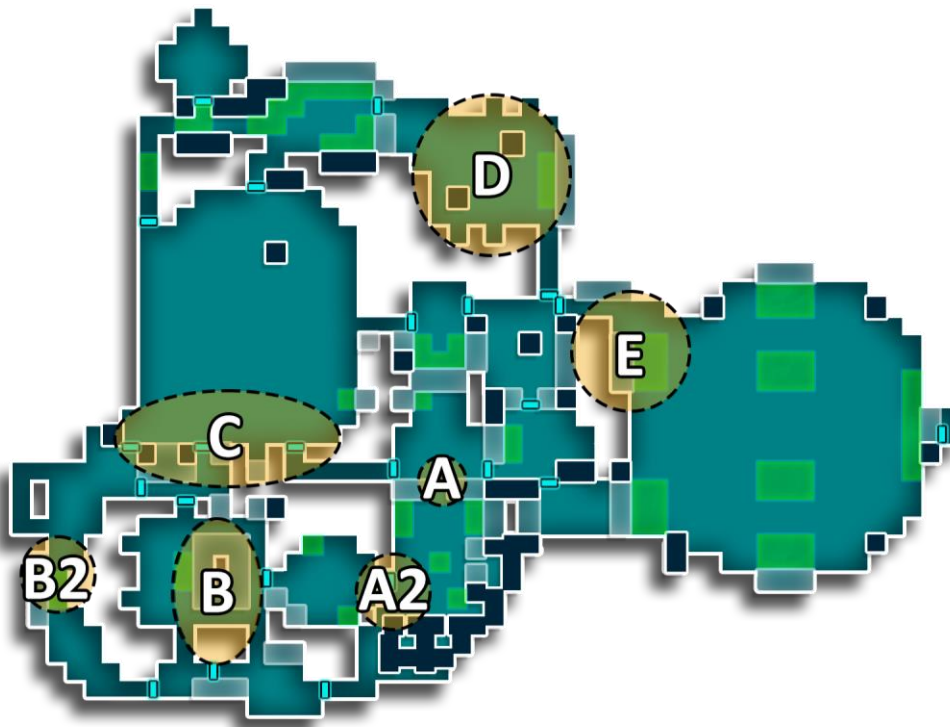


Conflict Points	Description
A	Two crabs within an enclosed space, making this encounter contrast the previous one and force the player to be more aware of their surroundings.
A2	Crab corridor. A sudden change in pace and gameplay to force the player to be more careful and precise whilst aiming and to have environmental awareness to avoid other incoming Crab projectiles.

B	Guncrab area – players will most likely get killed here but can use the glass as cover to strafe around them. It is an intense battle where there is no shame in leaving.
B2	Guncrabs reappear but this time the player should have the Plasma rifle equipped, meaning they can get the satisfaction of killing them with relative ease.
C	Bullet hell area, filled with a variety of enemies and traps for the player to overcome
D	Laboratory – tighter combat
E	Boss room – the final battle of the game, where the player must battle hordes of zombies whilst strafing to avoid the boss's attacks. After defeating the boss, the door at the end of the room opens and the end switch can be pressed.

Choke Points

-  Glass block
-  Wall Block
-  Door
-  Slime

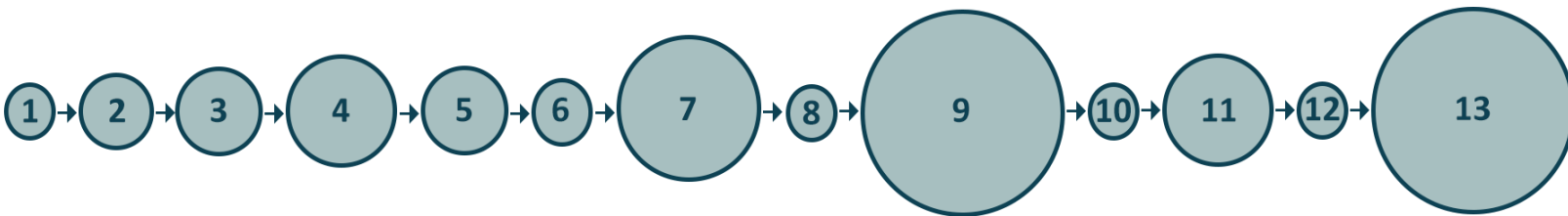


Choke Points	Description
A	The first door that funnels the player through to a room with more enemies
A2	Tougher enemies are introduced in this area and players are funneled into a much smaller room.
B	Multiple corridors for the player to be funneled through, with one being an optional checkpoint rest area, and the others leading to combat zones with Guncrabs.
B2	Guncrabs reappear around this corner but players have to jump over a floor of acid to get there.
C	The entrances that lead up to the bullet hell arena.
D	Laboratory entrance
E	Boss room entrance

Level Pacing

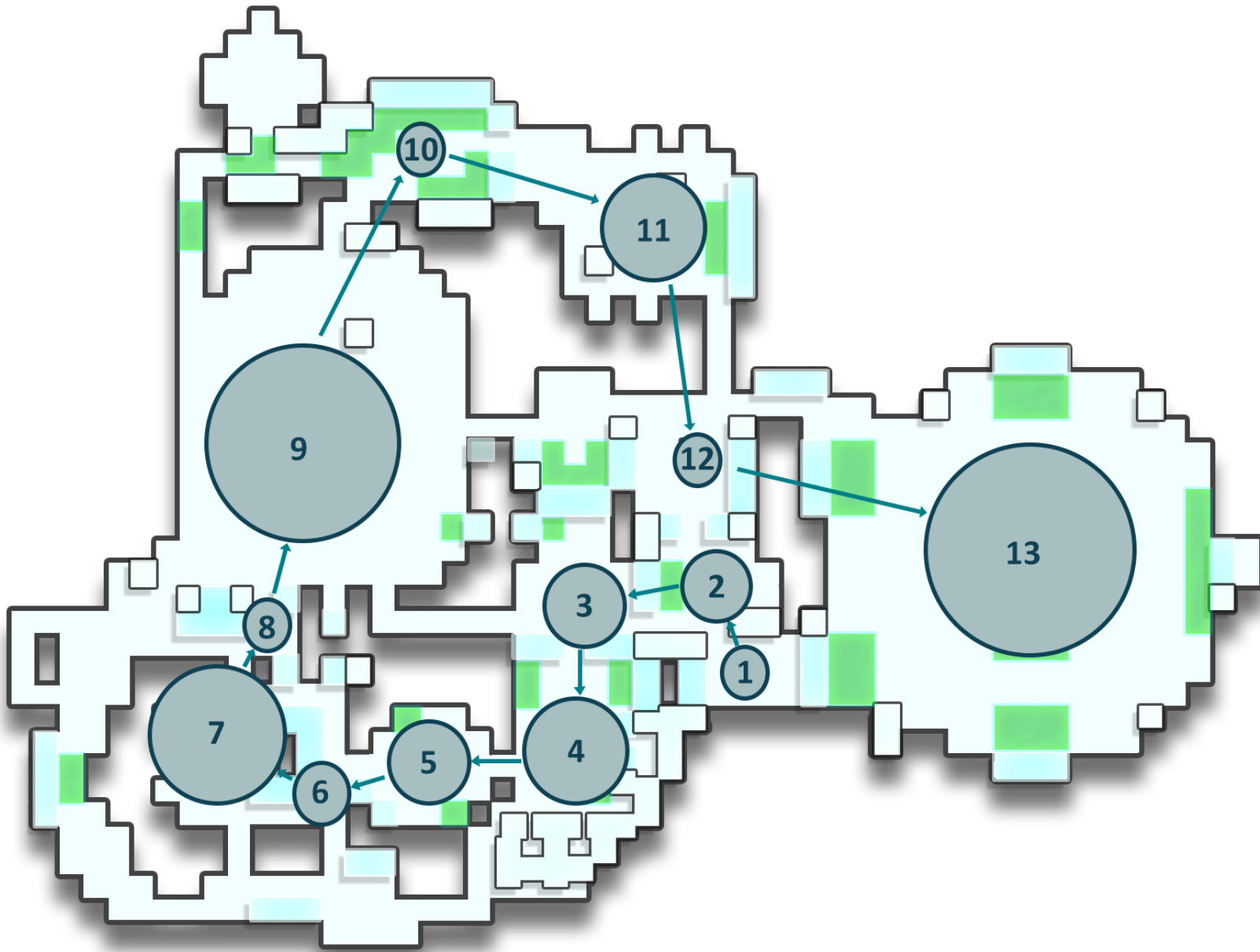
Bubble Map

Bubble Map



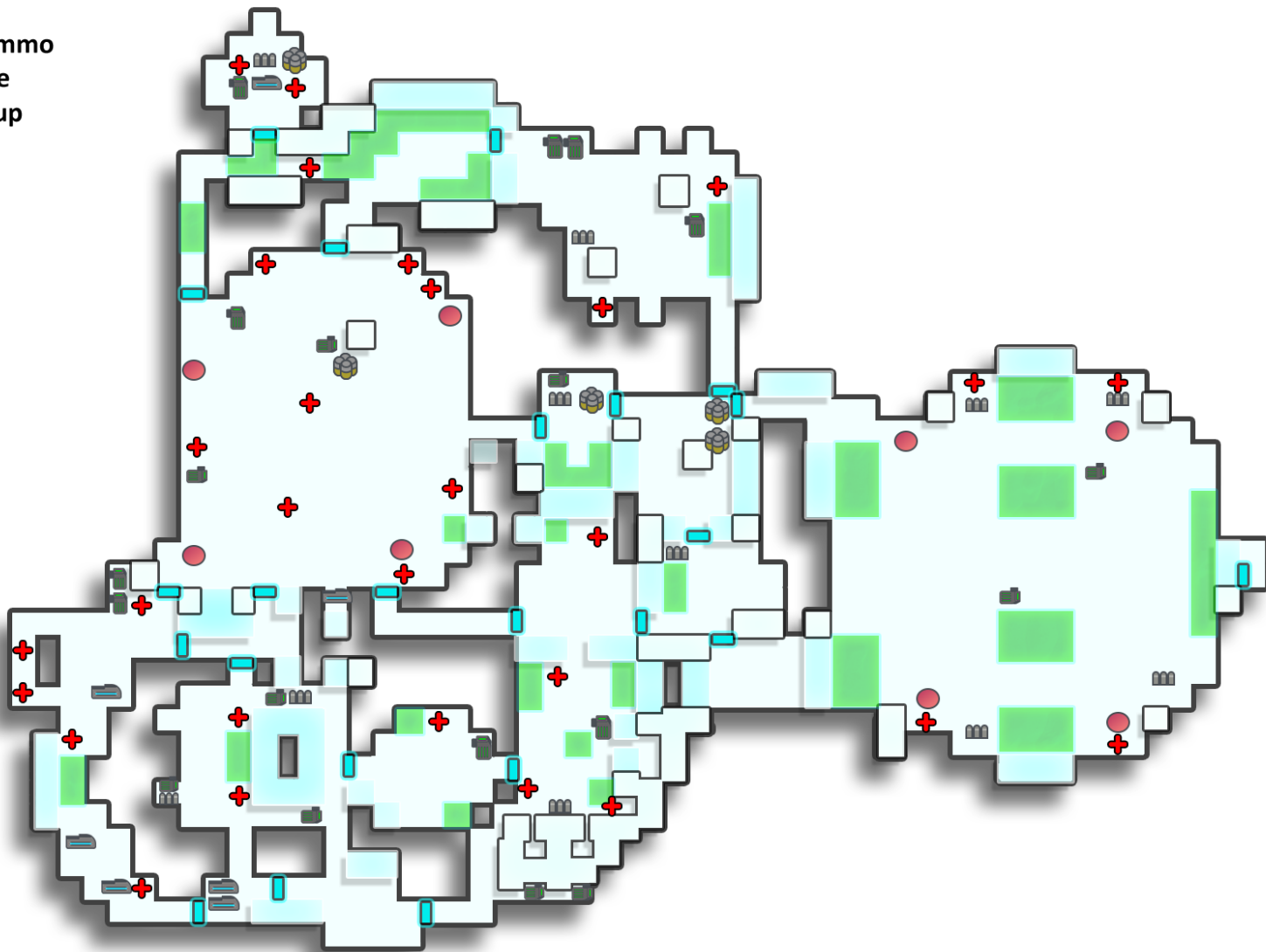
1. Player spawn
2. Defeat two small crabs
3. Defeat two normal crabs
4. Face the Crab corridor and defeat enemies
5. Defeat two Eyeguards in an enclosed area(with centre cover to familiarise players with covers importance in the level)
6. Defeat one weak zombie towards the left
7. Enclosed space with two Guncrabs. Can use the glass circular hallway that connects the nearby areas for cover. Defeat Guncrabs or just collect key.
8. Reach Checkpoint
9. Survive the Bullet Hell Arena, press the switch and escape
10. Calm lookout room
11. Laboratory filled with Zombies, Skullguys and eEyes
12. Checkpoint room
13. Final boss arena. Kill boss then press the end level switch


Bubble map on critical path








Pickup Map

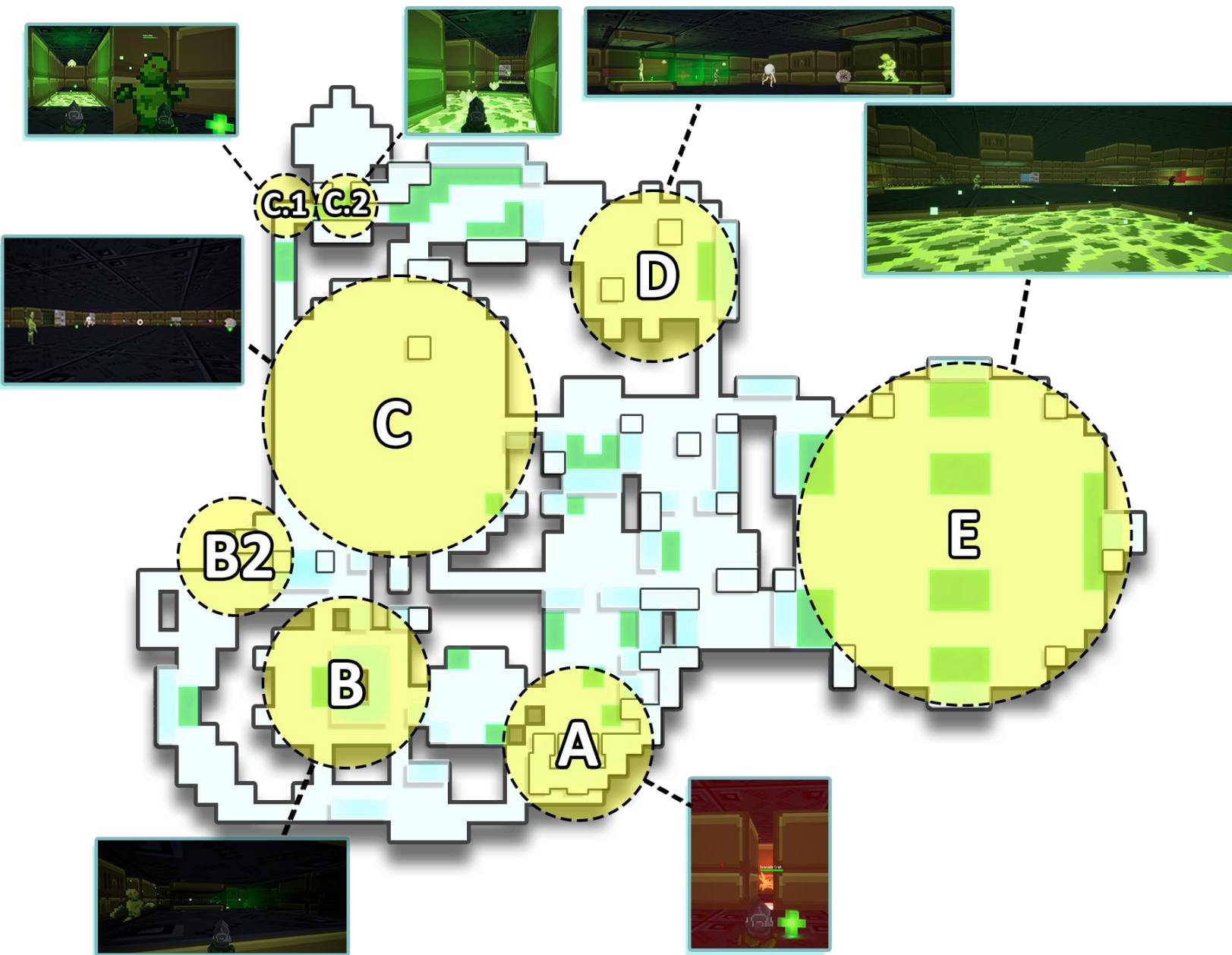
-  Glass block
-  Wall Block
-  Door
-  Slime
-  Pistol ammo
-  Grenade
-  Power up
-  Plasma
-  Shells
-  Health



Icon	Name	Additional info
	Pistol ammo	Since this is the characters backup weapon in any situation, as well as main weapon, it can be found in most rooms, but is not grouped together, as if they are distanced it may encourage players to experiment more with weapons

	Grenades	Often placed before or in rooms of higher intensity, for instance, before the boss room and inside the bullet hell arena
	Power	These pick-ups are extremely limited in rooms of the highest intensity. There is just enough in each room to activate full power, so players who aren't as skilled have a higher possibility of overcoming the challenge and may still feel rewarded in finding each one.
	Plasma ammo	These are placed in areas with enemies that spawn multiple projectiles and are challenging. This allows for players to satisfyingly overcome the enemies (particularly ones that may have killed them before). It deals high damage and is relatively easy to hit enemies whilst using the plasma rifle, so can help players out of challenging situations.
	Shotgun Shells	Placed often around corners before close combat encounters happen.
	Health	Due to the high intensity of the level, they are very commonly placed, as players will often find themselves running from health pick-up to pick-up to survive.

Challenges

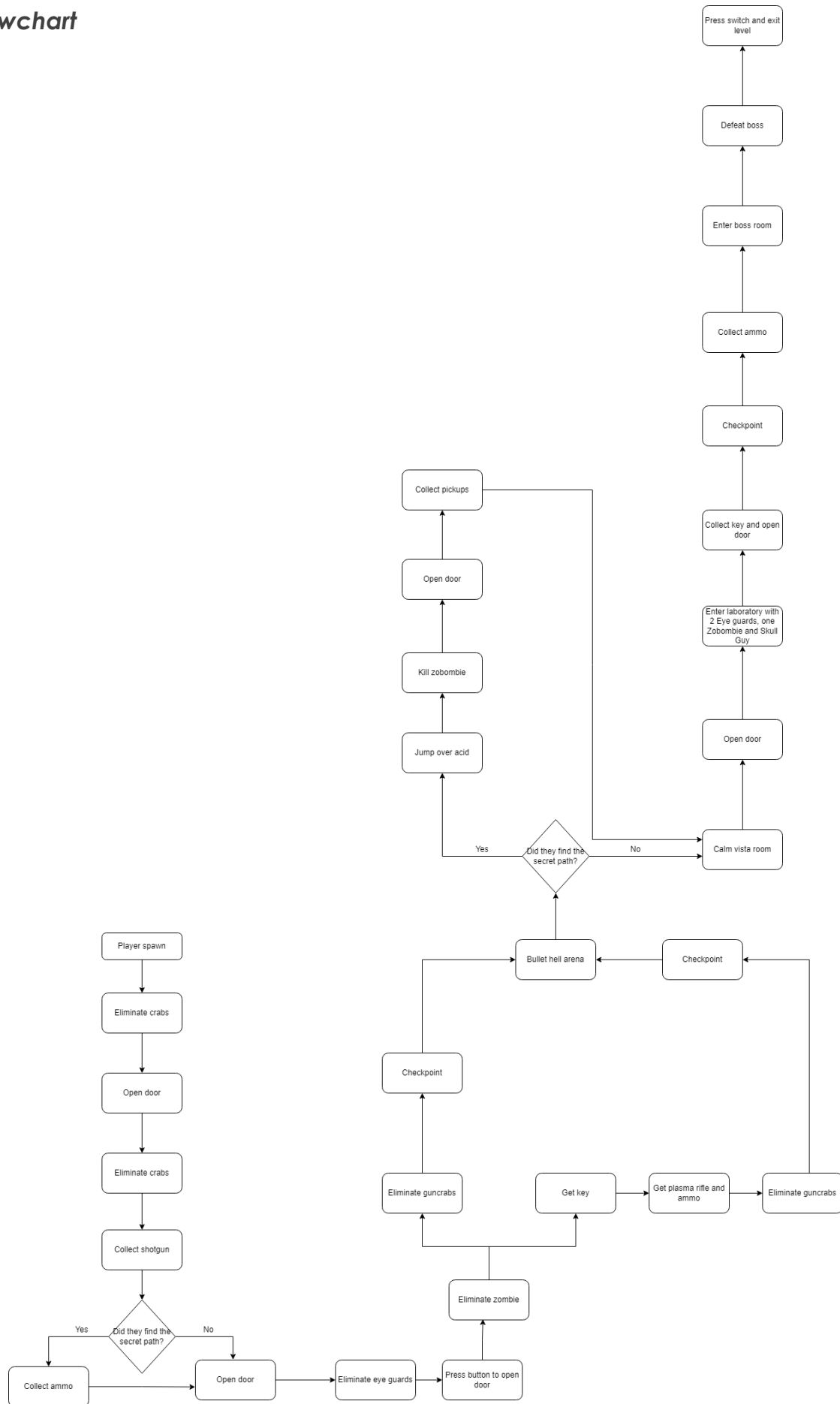


Challenge no.	Challenge description
A	Gun crab corridor, where they are hiding in small slits and can snipe at the player. The player must aim steadily and be aware of other enemies simultaneously.

B	A room filled with guncrabs, to overcome the challenge players must utilize the circular glass structure as cover.
B2	Guncrabs again but this time the player is armed with a plasma rifle, so can kill them much easier for a heightened sense of satisfaction upon defeating them.
C	A bullet hell arena featuring a variety of projectile traps and enemies for the player to overcome. Skilled players can attempt to kill all enemies, whereas less skilled players can simply try to open the door (by making it to the middle) and then leaving.
C.1	In this tight optional route, which leads to treasure, a zombie is in the corner which could surprise the player after they jump over slime.
C.2	Multiple jumps the player must make whilst avoiding being burned by the acid.
D	A laboratory filled with multiple enemies in a relatively tight space.
E	The final room with many zobombies and the Skull Boss.

Flowchart

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Balance Considerations

Expected Issues

- Player's might get confused by locked doors and search for a switch, even if it's not currently accessible due to it being behind the door.
- Not noticing grey pickups such as bullets and Tri-Gun
- Not using the circle for cover in the Guncrab area
- Player's might not find all power ups to be able to overcome challenging combat
- Player's might not circle around the glass Guncrab area for cover to survive
- Players might not be able to find all Power up items

Testing Plan

I planned to acquire some individuals to participate in playing my level to the best of their ability, then filling out a form that I made in Microsoft Teams. Furthermore, whilst they play my level The questions are as follows:

1. How hard did you find this game?

[More Details](#)

Very easy	0
Easy	0
Average	0
Challenging	2
Very challenging	0



2. How hard was it to find your way around the level?

[More Details](#)

Very easy	0
Easy	0
Just right	2
Hard	0
Very hard	0



3. Did the rooms feel unique from one another?

[More Details](#)

Yes	2
No	0



4. How did you find the number of pick ups (health and ammo) in the game?

[More Details](#)

Far too few	0
Too few	0
Just right	2
Too many	0
For too many	0



5. Are there any areas in the game you find unfairly difficult? If so please explain below

[More Details](#)

2
Responses

Latest Responses

"nope"

6. Which weapon did you find yourself using the most?

[More Details](#)

● Grenade launcher	0
● Tri-gun	0
● Pistol	1
● Plasma gun	1



7. Was there enough enemy variety?

[More Details](#)

● Yes	2
● No	0
● Other	0



8. Did you like the final boss fight?

[More Details](#)

● Yes	1
● No	0



9. If you can, explain what you liked/disliked about the boss fight

[More Details](#)

1
Responses

Latest Responses
"i found it to be the right pace and also challenging"

10. Were there enough checkpoints?

[More Details](#)

Yes	2
No	0



11. Any additional checkpoint thoughts

[More Details](#)

1
Responses

Latest Responses
"put them slightly higher "

12. "I was immersed in the game"

[More Details](#)

-3 Strongly Disagree	0
-2	0
-2	0
0	0
1	0
2	1
3 Strongly agree	1



13. "I enjoyed exploring the level"

[More Details](#)

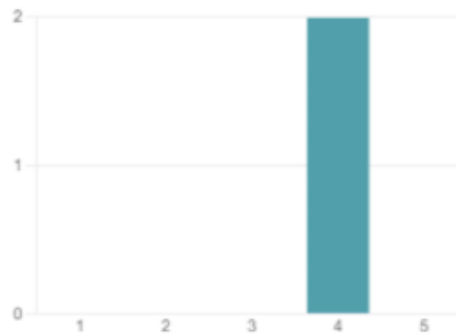
Strongly disagree	0
Disagree	0
Neutral	0
Agree	2
Strongly agree	0



14. How entertaining did you find the level overall?

[More Details](#)

4.00
Average Rating



The responses greatly aided my iterative process and enabled me to see faults which otherwise I may not have noticed.

Below are thoughts on the answers:

Question 1- How hard did you find this level?

Overall from the results we can see that they found the level challenging, which matches the difficulty I was going for. Although, I do not want the game to be unfairly challenging.

Question 2- How hard was it to find your way around the level?

Despite both players finding it just right to navigate, player 1 did struggle with locked doors.

Question 3- Did the rooms feel unique from one another?

This question could have been more specific, as despite both players saying the rooms felt unique, but this could be due to the gameplay being different, and less about aesthetics. I could have asked two more specific questions about the uniqueness of each room.

Question 4- How did you find the number of pickups in the game?

They both found the amount of ammunition to be just right, as this was a particular concern of mine due to internal playtesting, lots of changes were made over time to the amount of ammo. In the mitigation strategies, you can see what I did to deal with ammo issues.

Question 5- Are there any areas in the game you feel were unfairly difficult? If so please explain below

One person found the Guncrab room to be particularly unfair, so I removed one Guncrab and gave the player slightly more ammunition to deal with them.

Question 6- Which weapon did you find yourself using the most?

Both players who played the level enjoyed using a different weapon more overall, which could show that the level was designed with more freedom and less bias in mind, which could empower the player's decisions.

Question 7- Was there enough enemy variety?

Both players seemed to unanimously agree there was enough. Enemy variety was something I was very conscious about when placing enemies, so it's reassuring to see that it translated effectively during their playtesting.

Question 8 – Did you like the final boss fight?

From this, you can only see that one person was able to fill this out. This is as they struggled to navigate to it, but changes, as denoted below, were made to ensure players would have an easier time navigating. But the player who answered and was able to enjoy the boss battle, played the level after the changes were made.

Question 9- If you can, please explain what you liked about the final boss fight?

The player who experienced the final boss said they enjoyed the pacing and found it to be challenging.

The room is more distinct in comparison to the others, giving the players lots of opportunity to strafe around and move to avoid the boss's spree of projectiles.

Question 10- Were there enough checkpoints?

Both players were unanimous in thinking there was enough, however, some were placed too low into the ground, which led to the occasional issue of the player being stuck upon respawn. This was fixed after discovery.

Question 12- "I was immersed in the game"

Both agreed that they were, which suggests the gameplay was paced enjoyable and the reward, despite the difficulty was enough to keep them satisfied and in the immersion loop.

Question 13- "I enjoyed exploring the level"

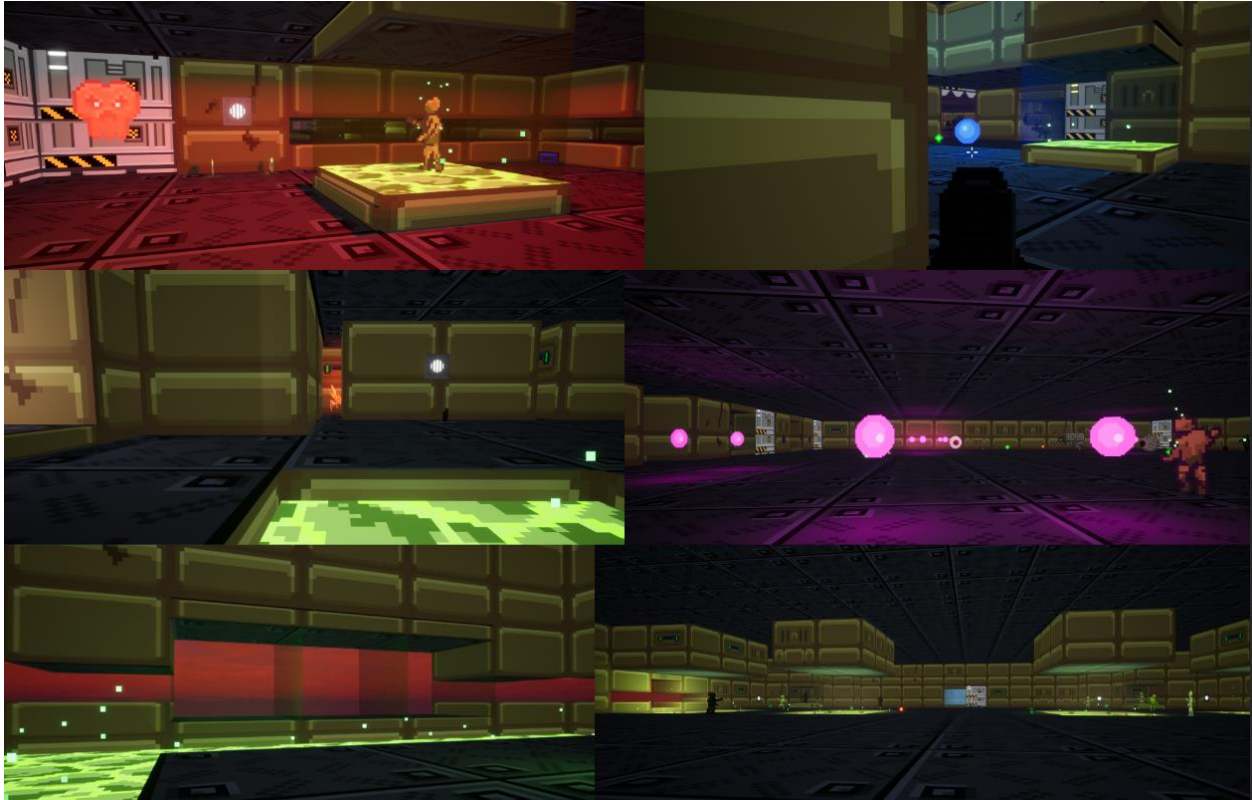
As evident from the chart above, both enjoyed exploring the level. However, I could have added a description box of their additional thoughts on exploration for more analysis on this topic.

Question 14- How entertaining did you find the level overall?

It was rated 4/5 overall but could have benefited from an additional question for "any other thoughts" or some player background knowledge to know if they enjoy shooters usually.

Mitigation Strategy and Changelog**What if the player gets lost?**

During an early playtesting I noticed some players get lost and were unable to recognise if they had previously traversed in an area, so to help I tried the methods below:



Many rooms have their own visual identity to make them more distinguishable, in the event a player traverses backwards by mistake, so that they recognize each area.

For example, Guncrab rooms are lit blue, the bullet hell arena is the only room with purple lighting due to traps etc and the calm lookout room not only stands out due to the vista, but the change in pace in comparison to the last entered room.

Furthermore, rooms are often viewable through windows so players can see ahead/behind.

What if the player cannot find pickups in the low light and dark colour pallet environment?

During early internal playtesting, I was concerned at the low visibility of items, so I placed them underneath lights for pattern recognition, in hopes that players will instinctively run towards them eventually.



What if the players cannot find all the Power Ups in a room?

In the two rooms of highest difficulty, the power ups are placed in each corner of the room. Hopefully this pattern is recognized by the player, so if they find the bullet hell arena or boss battle too challenging, they can collect 4 Power Ups to defeat them with more ease.

What if a locked door confuses a player?

During playtesting locked doors often confused players, especially if they required a switch, which is on the other side of the room and currently inaccessible.

To help players understand the door is currently inaccessible, I have the switch on the other side visible through glass. Hopefully this will enable players to understand the switch on the other side unlocks it and there's no need to look for keys.

Observational Playtesting Changes

*changes made from watching playtesters, rather than looking at their feedback

Before

After

Summary of change

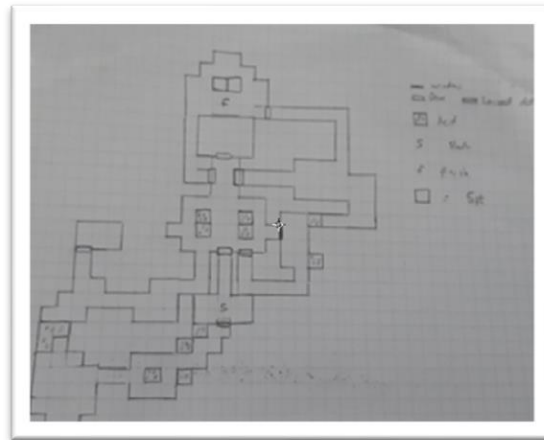
Moved the switch to be central to the room, to be more noticeable as it took some players a while to find it.

Switch to open the bullet hell arena more centralized and obvious for the player, as well as more cover placed in the area.

Players were stuck on this door for a while attempting to find the switch, so the glass was placed on the other side, to show them the switch is behind and that it leads to a checkpoint.

Initial Map Iterations

Original pencil map



Iterated pencil map v2

