

Games Design Document

Game Name

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High Concept:

One Line Introduction:

A fast paced, Shantae's Pirate Curse inspired adventure game focused on exploration and speedy leveling.

Theme/Environment/Setting

Realistic / Fantasy Inspired / Gothic Cathedral

Unique Selling Point/s and Key Mechanics

Emphasis on speedy bingeable gameplay and focus on collecting powerful equipment to unlock more sectors of the world.

Enemy Types

There will be a diverse roster of enemies sprinkled throughout the level, the complexity progressing as the player gets more comfortable with the mechanics and surroundings. Starting with small Goomba like enemies that have one or two predictable paths they follow, steadily the difficulty progresses and enemies who can block player attacks are more common.

Pickups



In *Super Metroid*, after the game's introductory level, the player is incrementally given necessary suit upgrades and items to explore more of the game. The morph ball, the first upgrade allows the ability to traverse through the small one tile gaps. The missile and super missile items are the keys to unlocking colour coded doors.

This game should have similar utility in its items and weapons. The framework already has a door/key system in place, so I can add bomb items that behave as damage sources and act as keys for specific doors. Iron reinforced doors that are opened with regular bombs. It does not have to be bombs, the game has a simple spell attack system in place which I can use, spells that open magic binded doors. The stronger the spell, the higher tier door they can open.

Super Metroid and most Metroidvania titles have more complex utility, later in the game you unlock the ability to wall jump and use a grappling hook. The framework currently has advanced movement in the form of dashing and double jumping.

Weapon Types

Taking cues from the main weapon in *Shantae and the Pirate's Curse*, the hair whip. The player's main weapon in this game will gradually get stronger as they level up in a similar fashion. But the short range will make later upgrades more relied upon for tougher encounters.

Different weapons in *Shantae* instead give the player more utility, the cannon allows the player to jump multiple times in the air and the curse sword turns the player into a speeding bullet train, which makes backtracking and certain set pieces more manageable. I want to try something similar with the upgrades the player can collect in this game.

Player Characteristics Outline

A nameless, vengeful Vampire that has suffered under the cruel ruling boot of the elite humans who live up in their large, dark, and scary castle. For too long our protagonist has watched his kind be undermined and subjugated, having their inherit magical abilities split from their souls to fuel the power of this evil human family. They have collected so much magic over the millennia that they display it openly and carelessly on angelic statues as a sign of their power. But no longer can you sit back and watch this continue, you will enact the same cruelty onto them as they did to you. Infiltrating the castle and taking back ancient magic stolen from your kind to enact your revenge. Becoming a Malevolent Vampire!

Target Audience

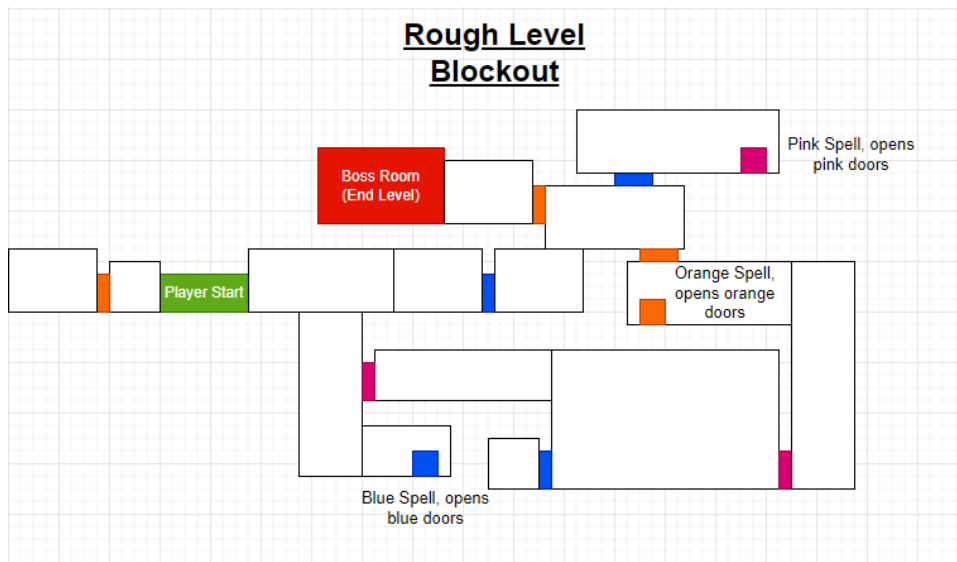
The game assets and art lean it to a darker gothic tone. The aesthetic may be dark, however the minimal story content I will attempt to add will be lighthearted. I have chosen this path as I want this game to be accessible to a wide demographic from early teens to adults, a game with similar appeal would be *Darkest Dungeon*, although that is not a Metroidvania style game.

Market and Competitors

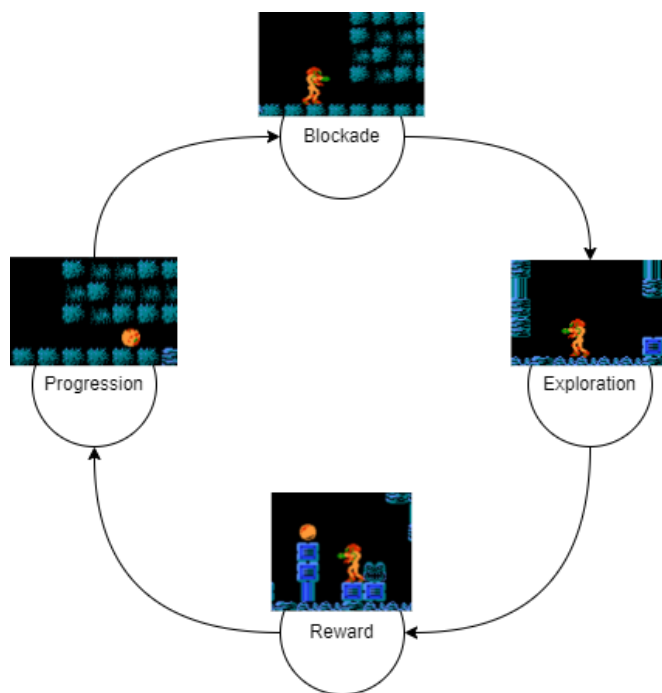
I would say the two big games on the market right now for Metroidvania are the newly released *Metroid Dread* and 2017's *Hollow Knight*, judging from steam's bestselling page for the 'metroidvania' tag.

Level Design documentation:

Goals of Level and Key Areas



I myself do not play metroidvania games often, but from my studying I have managed to pinpoint four fundamental pillars to gameplay which I believe make up a good metroidvania game or styled level:



Blockade: The player tries to move forward but does not have the necessary tools to get past an obstacle. The obstruction can be something as simple as a wall being too high to jump over or the gap being too small to walk through.

Exploration: Not being able to progress, the player backtracks to the previous area to search for paths or items they have missed.

Reward: Their exploration is rewarded with the tools to continue forward through the game.

Progression: The obstacle is passed, onto the next area where the same cycle will continue again.

Not an amazing observation, but that is the gameplay loop most prevalent in the Metroidvania games I have played. So far in my early development, the level plan repeats this cycle in miniature form three separate times with the blue, pink and orange paths.

Focal Point

That is what my main goal for the level is, to replicate the core gameplay loop. First and foremost, I should make this core gameplay fun and engaging even for people not used to the genre. An issue I have with the genre is in the beginning you are usually too weak and that can make the first areas a slog to play through. I have been considering ways of

making the player character competent but not so overly powered from the start that it trivializes the games challenge.

Story (How, Why, What?)

“You are a travelling vampire warrior whose great magical powers have been swiped and sealed away in a large, mythical and mysterious castle by the dubious vampire slayer family. These elite humans have oppressed your vampire kind for centuries, always stealing your inherited magical powers and exploiting them to use for war, profit and fun. No one has had the bravery or will to fight back and succeed... Until now!”

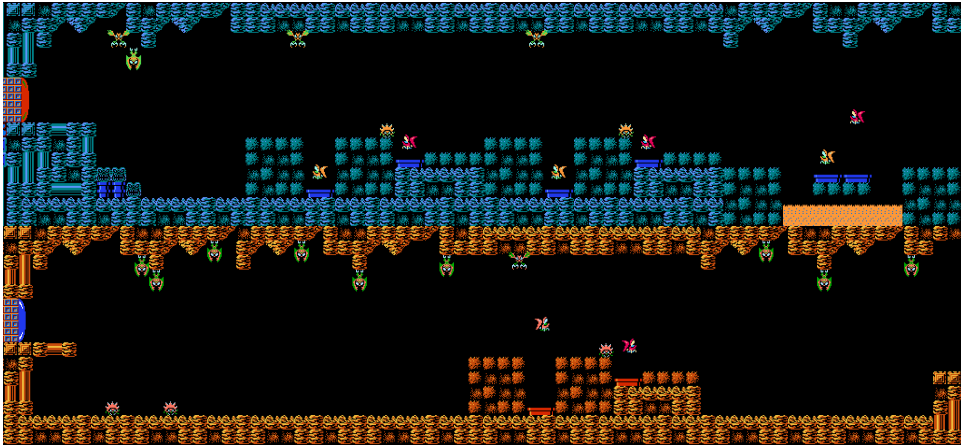
“You have followed the long path to their mighty castle, but the journey has just begun. The castle is protected by hordes of gremlins, heads of fiery phantoms and stone golems. And the castle is locked down by many spell barriers and contraptions both inside and outside. Find and collect your stolen abilities as well as other spells long since forgotten to storm deeper into the castle and cast away the evil family once and for all.”

Gameplay Influences

<i>Shantae and the Pirate's Curse:</i>	
1.	Attacks and Weapons can be upgraded at a shop on the first island that acts as a world hub. New expensive attacks and techniques can also be brought. Early on it's a game of choosing to upgrade your current power or give yourself more versatility.
2.	Emphasis on platforming and set pieces that change the formula. On the third island, there is a linear section where Shantae must carry RottyTops to the end of the level and she cannot use her attacks or abilities.
<i>Super Metroid:</i>	
1.	Areas are locked off until the player acquires certain items, such as various bombs. The segmented level design tends to help newer players figure out the intended game path to progress.
2.	Bosses are about resource management as they are fighting, Samus's regular weapon deals pitiful damage, so the alternative is to use missiles against boss fights for most of the game, which the player can only hold a small amount of without later upgrades.
<i>Hollow Knight:</i>	
1.	Difficulty is what the game is most well-known for, being compared to the likes of older games on the Nintendo Entertainment System and the more recent 'Souls' Titles from FromSoftware.
<i>Axiom Verge:</i>	
1.	Quick-Switching. A mechanic usually seen in FPS games, in this game allows you to switch between two of your most recently used weapons seamlessly without having to pause the game momentarily to use the weapon wheel. A mechanic like this would help to keep the action flowing in the game.

Visual Development

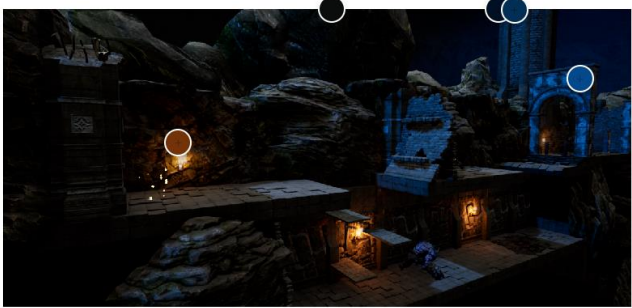
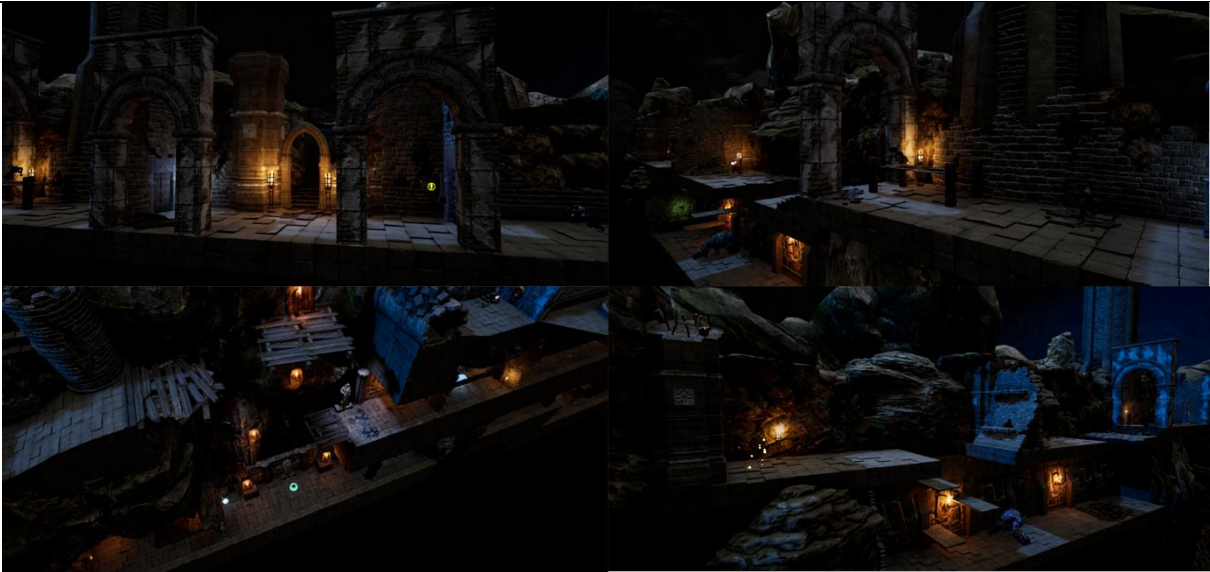
I will be using the infinity blade assets that come packaged with the project. The assets will be useful by making certain areas distinct from one another and giving each location its own unique feel. It is necessary to avoid the whole level having the same presentation as it could become confusing to navigate and boring to look at. Even in the 35-year-old pioneer *METROID*, the developers understood that making the map look the same could lead to problems.



These two areas are the exact same, but the different colour hue can help the player navigate around the map by recognizing landmarks. This is not very efficient, but it does help.

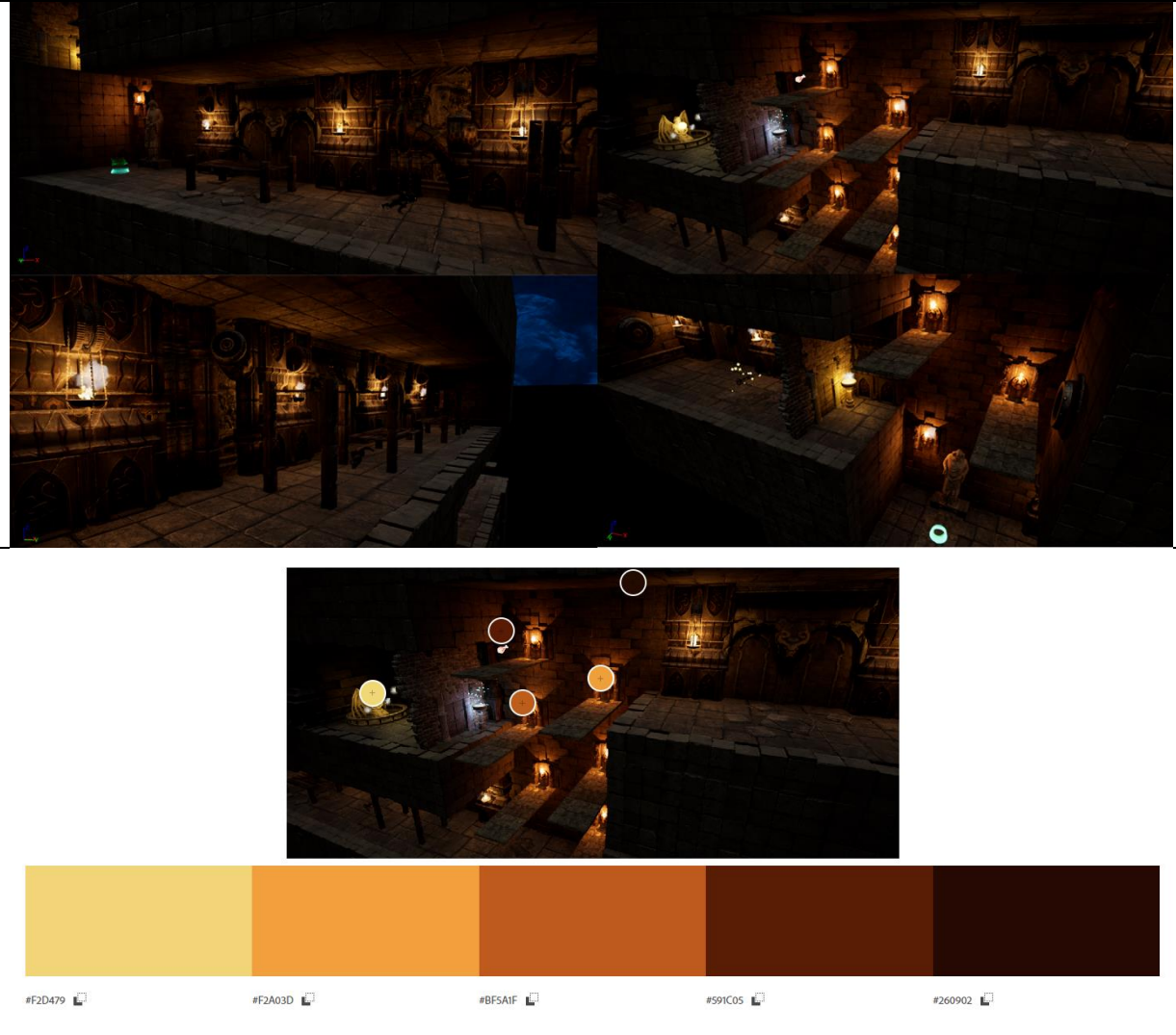
Colour and Lighting

Area 1 Moodboard and Colour Pallet



#010D26 #034C8C #023059 #73310A #0D0D0D

Area 2 Moodboard and Colour Pallet



Level Design Plans, Progression and Rewards












Focal Point Location

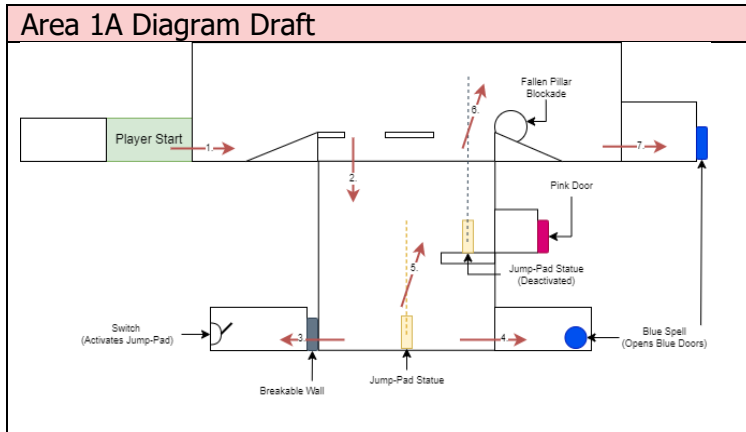
The castle is the final area of the level, and the level is being designed around building up the journey to reach and open those castle gates. A cutscene at the beginning of the level that shows the entrance of the castle to establish a goal for the player to reach. The story for the game is not explained and it is not a focus either.

Level Flow & Critical Path Analysis

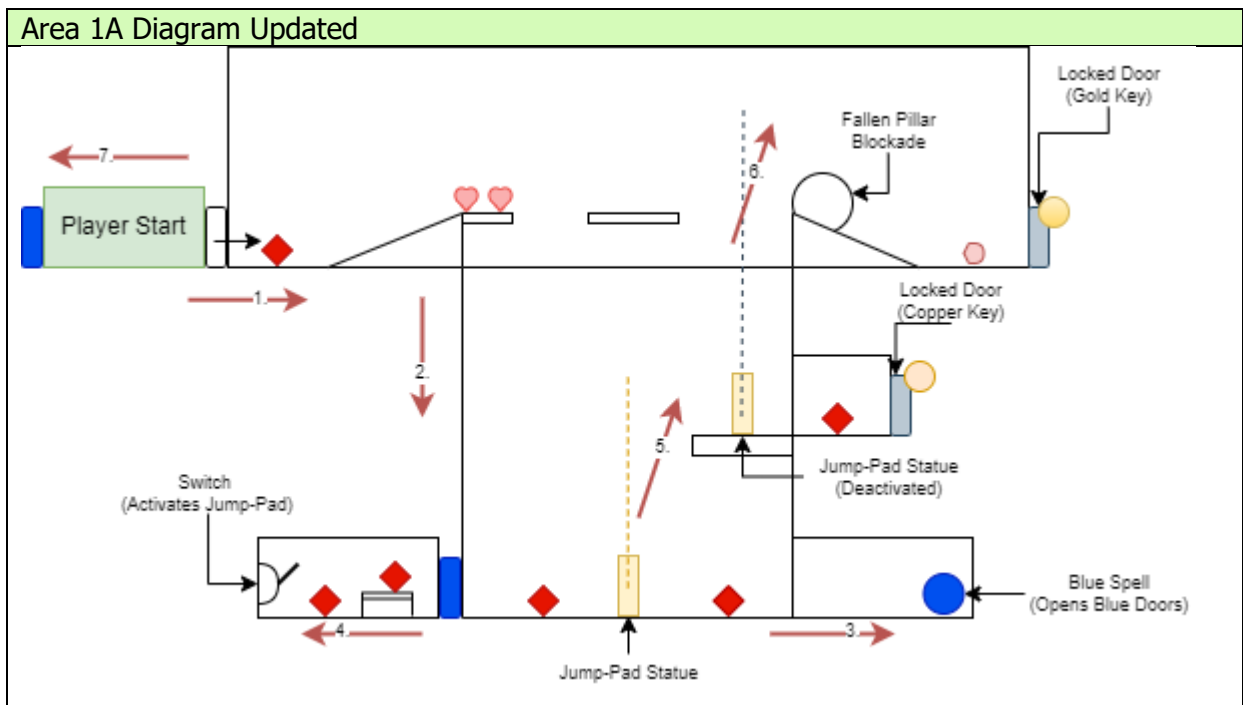
Item and Interactable List

From playing some Metroidvania replicate the same flow and gameplay of, the critical path needs to be non-linear. From the games I chose to play, they rely on the player memorising oddities and locations for them to come back to after they have obtained new gear or have triggered a switch somewhere else.

Item and Interactable List			
	Small Enemy		Health Pickup
	Heavy Enemy		Attack Upgrade
	Key		Defense Upgrade
	Door (Arrow Points which way the door opens)		Heart Stacks
	Blue Spell (Opens Blue Doors)		Gate Switch
	Yellow Spell (Opens Yellow Doors)		

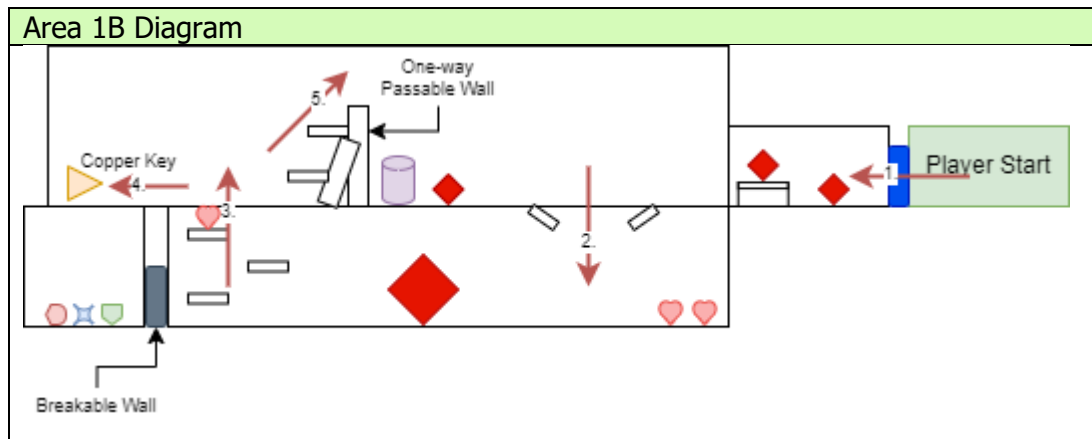


The first rough draft of the first area of the level, based off and following closely to the blockout before I figured out a more through plan of what I wanted my level to be while working in the engine.

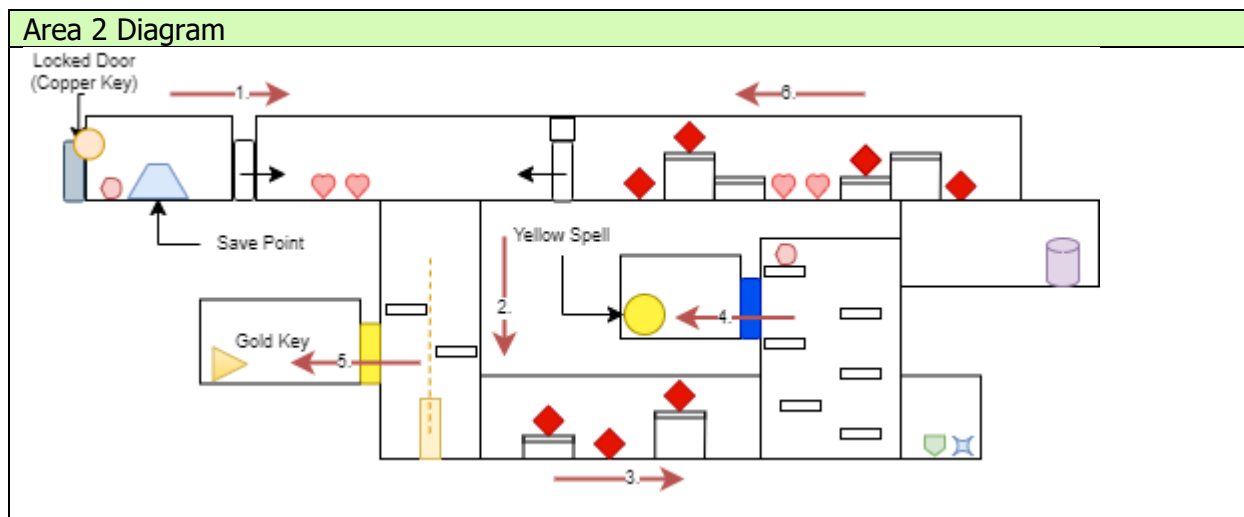


The red arrows indicate which direction and order of events the player will follow to progress through the level. The first area of the level is full of blockades which force the player to explore and find what items are needed to progress, the first and most important being the two blue doors. The copper and gold keys are found in other areas of the level, which means you will be backtracking here with the latest items and rewards you have collected.

The first major power-up the gets is the blue spell, a ranged attack which can also open corresponding blue doors.

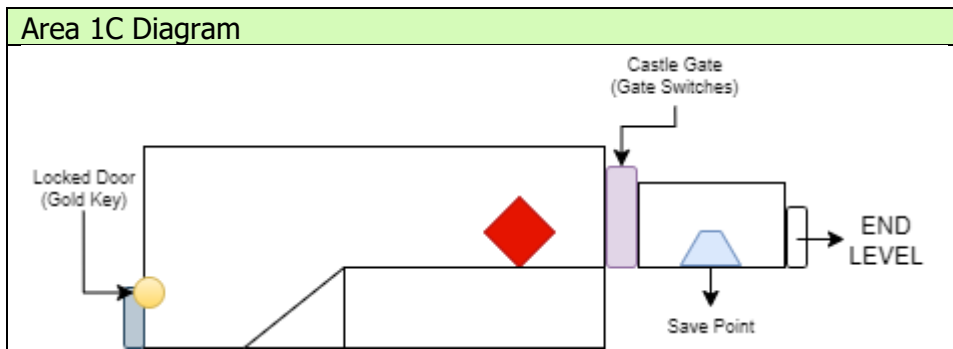


The next area started as a room for the copper key, but it was expanded to introduce a new enemy type and to extend playtime of the level. Later in development, further priority was added to the area by placing a trigger for the end level gate, one of two placed around the level. The castle gate trigger adds a secondary objective for the player to explore previously entered areas encase they missed it the first time. This gameplay segment was inspired from a coffin search fetch quest in *Shantae and the Pirate's Curse*.

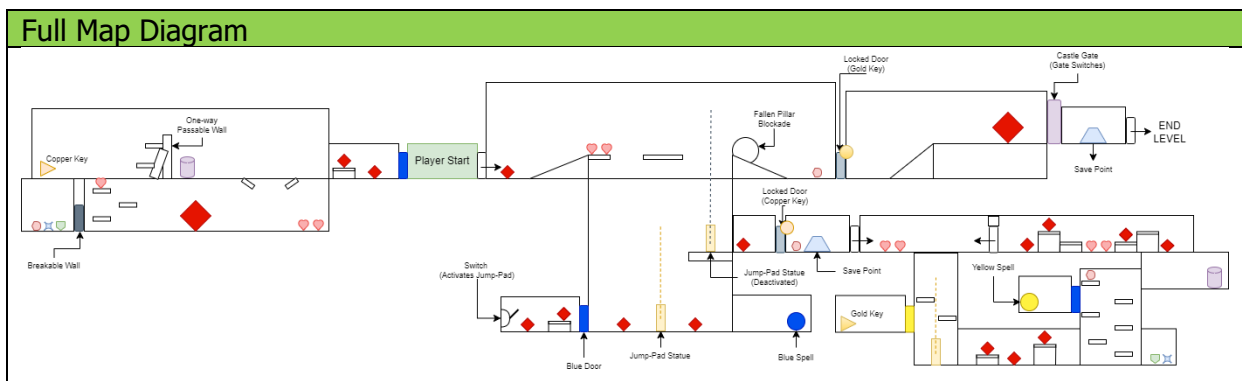


There is a small safe room in-between the two areas, this room is where the player can save and respawn safely without being harassed by enemies. The notable game important objects of this area are the yellow spell, the Gold Key, and the final gate switch. By this point in the level the player should have their bearings on the controls and simple combat, enemy density here is higher to compensate for their higher skill threshold. The second secret area is hidden here too, that provides an attack and defense upgrade to reward those players who prioritize learning the level layout and discovering hidden areas. The final gate switch is placed slightly off the beaten path but still quite easy to find as to not extend gameplay too

much.



This was supposed to be the start of Area 3 of the game, the castle gate was the big imposing entrance before the final challenge of the level. But because of time constraints it had to be reduced to a part of the first area and made into a simple boss area.



Scripted Sequence documentation:

Camera Shots & Scenes

[S2 Project Opening Cutscene Showcase - YouTube](#)

On level start, the cutscene plays. The camera climbs a flight of stairs before highlighting the main castle door, it pans and twists up to show the castle towering over the level. It is supposed to intrigue players to go to this location as an objective. The inspiration for this cutscene were the beginnings of older *Castlevania* games when the protagonists look at Dracula's Castle from the gates. This cutscene was made partly to pay homage to that. The cutscene is twelve seconds in length and cannot be skipped, just so it cannot be accidentally missed by the player. The cutscene will not replay on player restart after death.

Screenshots of the Cutscene:



1. Camera pans up the stairs for three seconds
2. The camera stops and watches the castle entrance for another three seconds.
3. It begins to rotate upwards, panning away from the door and looking at the main castle structure.
4. The final few seconds loom on this 'larger than life' shot, to impose the sinister nature of this castle.

[S2 Project Switch Activation Cutscene Showcase - YouTube](#)

A quick guide to show where the player to go when the switch has been activated. It was a common issue for player testers to not realise that one of the jump-pads was deactivated and therefore flipping the switch would not direct them to any kind of path. This cutscene railroads them on the correct path.

Asset List

Asset Name	Asset Type	Production Time	Source	Asset Name	Asset Type	Production Time	Source
SM_Plains_Floors_Block_01	Mesh	None	Framework	BreakableWall_NoGreen	Blueprint	1Minute	Original
SM_Plains_Floors_Block_02	Mesh	None	Framework	BreakableWall_RedHaze	Blueprint	10 Minutes	Original
SM_Plains_Floors_Block_04	Mesh	None	Framework	BreakableWall	Blueprint	None	Framework
SM_Plains_Floors_Block_05	Mesh	None	Framework	CustomKey_Pickup	Blueprint	10 Minutes	Original
SM_Plains_Floors_Block_06	Mesh	None	Framework	Door_BlueSpell	Blueprint	1Hour	Original
SM_Plains_Floors_Flat_01	Mesh	None	Framework	SmallDoor_BlueSpell	Blueprint	5 Minutes	Original
SM_Plains_Floors_Brick	Mesh	None	Framework	SmallDoor_OrangeSpell	Blueprint	5 Minutes	Original
SM_Plains_Column_Large	Mesh	None	Framework	SmallMagicThrow	Blueprint	1Hour 30 Minutes	Original
SM_Plains_Column_Large_Broken	Mesh	None	Framework	Upgrade_BlueMagicSpell	Blueprint	20 Minutes	Original
SM_Plains_CastleArch_Iron_Torch	Mesh	None	Framework	Upgrade_OrangeMagicSpell	Blueprint	5 Minutes	Original
SM_Plains_CastleWall_Ruin_01	Mesh	None	Framework	WaveSpawner	Blueprint	30 Minutes	Original
SM_Plains_CastleWall_Ruin_02	Mesh	None	Framework	WaveTrigger	Blueprint	10 Minutes	Original
SM_Plains_CastleWall_Ruin_03	Mesh	None	Framework	Switch_Lever	Blueprint	None	Framework
SM_Plains_CastleWall_Ruin_04	Mesh	None	Framework	DoorV1	Blueprint	None	Framework
SM_Plains_CastleWall_Curved_Ruin	Mesh	None	Framework	DoorV2	Blueprint	None	Framework
SM_Plains_SmallRock_01	Mesh	None	Framework	DoorV3	Blueprint	None	Framework
SM_Plains_LargeRock_Pile_01	Mesh	None	Framework	DoorV4	Blueprint	None	Framework
SM_Plains_LargeRock_01	Mesh	None	Framework	LockedDoorV1	Blueprint	None	Framework
SM_Plains_LargeRock_02	Mesh	None	Framework	BasicJumpPad	Blueprint	None	Framework
SM_Plains_LargeRock_03	Mesh	None	Framework	SignalJumpPad	Blueprint	None	Framework
SM_Plains_Floor	Mesh	None	Framework	SignalHolder	Blueprint	None	Framework
SM_Plains_Floors_Rubble_01	Mesh	None	Framework	Pickup_Hearts	Blueprint	None	Framework
SM_Plains_Floors_Rubble_02	Mesh	None	Framework	Pickup_HP	Blueprint	None	Framework
SM_Plains_Floors_Rubble_03	Mesh	None	Framework	Pickup_Defense	Blueprint	None	Framework
SM_Plains_Floors_Rubble_04	Mesh	None	Framework	Pickup_Strength	Blueprint	None	Framework
SM_Plains_Floors_Rubble_05	Mesh	None	Framework	SavePoint	Blueprint	None	Framework
SM_Plains_Wall_Straight	Mesh	None	Framework	Patrol_Enemy	Blueprint	None	Framework
SM_Plains_CastleWall_Support	Mesh	None	Framework	Projectile_Enemy	Blueprint	None	Framework
SM_Plains_StoneBlock	Mesh	None	Framework	Bomber_Enemy	Blueprint	None	Framework
SM_Plains_CastleTower_01	Mesh	None	Framework	FloatingHead	Blueprint	None	Framework
SM_Plains_Ruin_BuildingLOD01	Mesh	None	Framework	IBP_Char	Blueprint	None	Framework
SM_Plains_Ruin_BuildingLOD02	Mesh	None	Framework	IBP_Controller	Blueprint	None	Framework
SM_Plains_Ruin_BuildingLOD03	Mesh	None	Framework				
SM_Plains_CastleTower_Ruin_01	Mesh	None	Framework	Asset Name	Asset Type	Production Time	Source
SM_Plains_CastleTower_Ruin_02	Mesh	None	Framework	Castle_Cutscene	Level Sequence	1Hour	Original
SM_Plains_Wall_Curved	Mesh	None	Framework	Jumpad_Cutscene	Level Sequence	15 Minutes	Original
SM_Plains_Column_Mid	Mesh	None	Framework				
SM_Plains_Column_Small_01	Mesh	None	Framework	Asset Name	Asset Type	Production Time	Source
SM_Plains_Column_Small_Broken_01	Mesh	None	Framework	BlueFireFlies_Statue	Niagara Emitter	30 Minutes	Original
SM_Plains_Buttress_02	Mesh	None	Framework	BlueFireFlies_Door	Niagara Emitter	5 Minutes	Original
SM_Plains_Bridge_Wall_01	Mesh	None	Framework	SparkleEffect	Niagara Emitter	30 Minutes	Original
SM_Plains_Castle_Cage_01	Mesh	None	Framework				
SM_Plains_Castle_Cage_Broken_01	Mesh	None	Framework	Asset Name	Asset Type	Production Time	Source
SM_Plains_CastleArch_Ruin_01	Mesh	None	Framework	Black_Colour	Material	1Minute	Original
SM_Plains_ArchArch	Mesh	None	Framework	BluePower_Emissive	Material	5 Minutes	Original
SM_Plains_ShortWall_Straight_01	Mesh	None	Framework	OrangePower_Emissive	Material	5 Minutes	Original
SM_Plains_Wall_Railing_01	Mesh	None	Framework	SparkleMaterial	Material	15 Minutes	Original
SM_Plains_Castle_Circle_Railing	Mesh	None	Framework				
SM_Plains_Angel_Statue_01_nobase_torch	Mesh	None	Framework	Asset Name	Asset Type	Production Time	Source
SM_Fire_Rocky2_Floor_01	Mesh	None	Framework	SuperMetroid_PowerUp_SoundEffect	Sound	None	Youtube.com
SM_Fire_Rocky2_Floor_02	Mesh	None	Framework				
SM_Fire_Fort_Trim	Mesh	None	Framework				
SM_Env_Fire_OddsEnds Pillar	Mesh	None	Framework				
SM_FlameDungeon_ArchWall_01	Mesh	None	Framework				
SM_Fort_Wall	Mesh	None	Framework				
SM_Fire_Fort_Wall	Mesh	None	Framework				
SM_Fire_Piston_Base	Mesh	None	Framework				

Player Characters, Controls and Movement Abilities

Player Controls, Camera and Map

Controls/Keymapping

AD – Left/right movement

W – Jump, press again to initiate a double jump.

S – Crouch, slows the players movement and lowers their hitbox.

E – Interact

LMB/Spacebar – Whip Attack

Q – Small Blue Magic Attack

R – Large Orange Magic Attack

H – Healing Magic

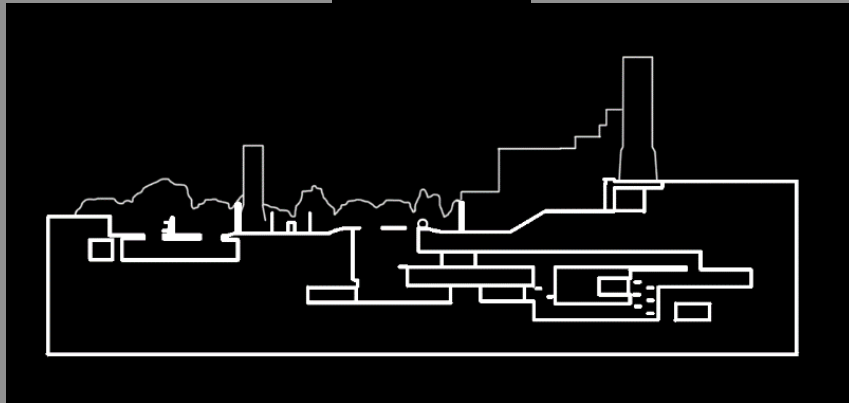
Player movement and physics has been altered from the base framework; the most major change was increasing the size of all actors in the game as they seemed too small in

comparison to the rest of assets. Player acceleration and movement has been altered as before the game was too slow and stiff for the style of gameplay the projected was aiming for.

Abilities

- Dashing – Double tapping either A or D will launch the player in the corresponding direction. A dash cannot be performed until the last input dash has completed its cool down.
- Double Jump – Pressing the W key again will launch the player upwards, timing it at the peak of the first jump will allow the maximum jump height.

Wireframe Map



Orthographic View of the Game Map



Note: This is not accurate lighting to the game, enabling orthographic view in Unreal Engine breaks the regular lighting.

Weapons and Abilities

Whip: The main close quarters weapon, the purpose of the whip is to conserve magic points for stronger attacks and deal with enemies that are not worth expending a ton of mana. However, the risk is the short range of the whip, it is designed to be difficult to use without getting yourself harmed while fighting if used carelessly.



Attack Wind-Up, has no collision so does not deal damage.



Attack End, whip now has collision and will deal damage.

The Whip also deals a base damage of 60 when strength is at the base level of 100. Leveling up and collecting strength power ups will up the damage of the whip along with other attacks. The whip is also the only attack that can deal damage to physical objects, so it is required to break down breakable walls.

Blue Magic Spell: The first upgrade the player will collect, it allows the player to unlock previously inaccessible rooms marked by blue particles. It is also a ranged attack that consumes a small amount of mana and can be used to take down enemies without putting yourself in danger.



On attack activation, the player reels back their right hand and then throws out a magic blue spinning axe. The projectile will fly until it collides with a wall or entity, then it will destroy itself after dealing damage.



Blue Spell Statue

The first obtainable ability in the game. There is no barrier to entry and can be found in the underground section of the level. A statue with a calming blue aura holds the ball which represents the upgrade, attacking it or touching it will give the player the magic spell.

Orange Magic Spell: The second collectable upgrade and serves the same functionality as the blue spell, but for orange coded rooms. The spell is also strong and able to take out large enemies in one or two blasts. At a full mana bar, the spell will consume half the bar. The blast radius can also make it useful for blasting multiple huddled enemies.



Orange Spell Statue

Located in the Fire Dungeon behind a blue barrier door. Interaction with the light ball is the same as before. This spell is placed here for use against the larger number enemies around.



Healing: This spell is useable from the start of the adventure. Instead of using mana, this spell takes resources from the heart container in the top left. It consumes 20 hearts to heal 25 points of health. The spell will not activate if the required amount of hearts is not met or the health bar is already full. A red light will appear over the player model to signal the spell has been activated.

Game Conditions

Win Conditions?

The game objective is simple, to reach the end of the level. Collect the necessary powers and find the two castle gate triggers placed around the level. Before I wanted some type of speedrun reward, the kind that you get for finishing games such as *Shantae* and *Super Metroid*. I also had plans for a score counter depending on how fast the stage was completed.

Lose Conditions?

On death the player will be sent back to the last save point, permanent death and level resets are not a feature of the game. The large design of the level and the already present backtracking would make having to replay the level from scratch after a few failures, tedious and frustrating.

Enemy Design



PATROLLER

Moves and switches between left and right paths, they deal damage on contact and have no ranged attack. They are the weakest and most plentiful enemy type and found in all areas of the level.

Statistics:

Health – 50 Points

Speed – 450 Points

Strength – 80 Points

Defense – 20 Points

XP on Kill – 200 XP



EXPLOSIVE PATROLLER

A rarer variant of the regular and they behave differently. They remain completely stationary until the player enters their activation range. The bomb on their back will begin ticking and they will start walking towards the player. They Explode on contact or after several seconds of walking. They only appear in the Fire Dungeon.

Statistics:

Health – 50 Points

Speed – 600 Points

Strength – 100 Points

Defense – 20 Points

XP on Kill – 200 XP

Ability Statistics:

Activation Range – 1000 Units

Bomb Damage – 200 Points



FLOATING HEAD

They attack in groups and fly in one set direction that is determined on spawn, they can phase through walls and objects for surprise attacks. They deal multi-hitting contact damage. They will disappear eventually. Can only be found in the Fire Dungeon.

Statistics:

Health – 50 Points
Strength – 100 Points
Defense – 20 Points
XP on Kill – 300 XP

Ability Statistics:

X Speed – (-350 Left/350 Right)
Wave Height – 45
Lifespan – 10 Seconds

STONE GOLEM

A boss enemy that remains stationery and fires two fireballs per attack. The fireballs can spawn at two different height points, that either require the player to jump or crouch to avoid. They cannot turn around, so the optimal strategy is attacking them from behind.



Statistics (First Encounter):

Health – 500 Points
Speed – 100 Points
Strength – 120 Points
Defense – 20 Points
XP on Kill – 500 XP

Ability Statistics (First Encounter):

Activation Range – 2000 Units
Fireball Damage – 20 Points
Fireball Speed – 500 Points

Statistics (Second Encounter):

Health – 800 Points
Speed – 100 Points
Strength – 120 Points
Defense – 20 Points
XP on Kill – 500 XP

Ability Statistics (Second Encounter):

Activation Range – 1500 Units
Fireball Damage – 30 Points
Fireball Speed – 600 Points