

# GUARDIAN SPIRIT

PROTECT THY MANSION!



*Broken Chair Studios*

# Team Members

| Designers   | Programmers   | Artists   |
|---|---|---|
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| Changelog |          |  |              |
|-----------|----------|--|--------------|
| Version # | Date     | Changes  | Author       |
| 0.0.0     | 20/09/24 | <ul style="list-style-type: none"> <li>Creation of the GDD Skeleton</li> </ul>   | Adrian Dixon |
| 0.0.1     | 23/09/24 | <ul style="list-style-type: none"> <li>Expanded the Gameplay section by adding/developing the following subsections                             <ul style="list-style-type: none"> <li>Overview</li> <li>Controls</li> <li>Systems (and relevant categories)</li> <li>Controls</li> <li>Tower/Enemy Tables</li> </ul> </li> </ul>  | Adrian Dixon |
| 0.0.2     | 25/09/24 | <ul style="list-style-type: none"> <li>Added to Overview                             <ul style="list-style-type: none"> <li>Setting</li> <li>Pillars/USP/Features</li> <li>The Pre-Production and Alpha milestones</li> </ul> </li> <li>Added to Sound Design                             <ul style="list-style-type: none"> <li>Music</li> <li>SFX</li> <li>Influences</li> </ul> </li> <li>Added to level narrative</li> </ul> | Damon Reid   |
| 0.0.2     | 25/09/24 | <ul style="list-style-type: none"> <li>Developed the Gameplay section further</li> </ul>   | Adrian Dixon |

|       |          |   |                 |
|-------|----------|---|-----------------|
|       |          | <ul style="list-style-type: none"> <li>○ Controls</li> <li>○ Player Role</li> <li>○ Tower Placement</li> <li>○ Enemies/Waves</li> <li>○ Shop</li> <li>● Developed Tower/Enemy/Ability tables and statistics</li> <li>● Developed Loops</li> <li>● Some formatting and general editing</li> </ul>  |                 |
| 0.0.2 | 25/09/24 | <ul style="list-style-type: none"> <li>● Researched 3 different tower defense games</li> <li>● Added their marketing strategies and sales data</li> <li>● Added mechanical influences we will borrow.</li> </ul>  | Thomas Ishikawa |
| 0.0.3 | 26/09/24 | <ul style="list-style-type: none"> <li>● Added to Influences under Sound Design</li> <li>● Added to characters in the game overview</li> <li>● Added images for: <ul style="list-style-type: none"> <li>○ Core Loop</li> <li>○ Level Loop</li> <li>○ Tower Placement Loop</li> <li>○ Shop Loop</li> </ul> </li> </ul>   | Damon Reid      |
| 0.0.3 | 26/09/24 | <ul style="list-style-type: none"> <li>● Reformatted the structure of the document</li> </ul>   | Adrian Dixon    |
| 0.0.4 | 9/10/24  | <ul style="list-style-type: none"> <li>● Added to the music section and added another reference for music</li> <li>● Edited the milestones section</li> <li>● Added the Elevator Pitch</li> <li>● Updated SFX section</li> <li>● Changed the main character's name from Echo to Ekko</li> </ul>   | Damon Reid      |
| 0.0.5 | 16/10/24 | <ul style="list-style-type: none"> <li>● Added wave pattern pictures and description</li> <li>● Added wave intervals documentation</li> </ul>   | Thomas Ishikawa |
| 0.0.5 | 16/10/24 | <ul style="list-style-type: none"> <li>● Added to the music references</li> <li>● Edited the ectoplasm spread ability in the Ghost Abilities section</li> </ul>   | Damon Reid      |
| 0.0.6 | 18/10/24 | <ul style="list-style-type: none"> <li>● Redeveloped the Pillars and USPs</li> <li>● Removed 'isometric'</li> <li>● Added the Game Overview</li> <li>● Added Risk Assessment</li> <li>● Developed Level Design <ul style="list-style-type: none"> <li>○ Narrative</li> </ul> </li> <li>● Edited Abilities and Towers segments for new design direction</li> </ul> | Adrian Dixon    |
| 0.0.6 | 18/10/24 | <ul style="list-style-type: none"> <li>● Added to the music section</li> </ul>  | Damon Reid      |

|       |          |  |              |
|-------|----------|--|--------------|
|       |          | <ul style="list-style-type: none"> <li>• Replaced all the mentions of the castle to Manor</li> <li>• General Formatting updates (mainly headings for the wave spawn patterns and intervals)</li> <li>• Added to tower notes</li> <li>• Added The Occult to the characters, with some narrative</li> </ul>                    |              |
| 0.0.7 | 23/10/24 | <ul style="list-style-type: none"> <li>• Added Shop table</li> <li>• Added Tower Upgrade Costs table</li> <li>• Added Upgrade columns to Towers and Abilities</li> <li>• Added Title graphic</li> <li>• Updated various segments in the Gameplay section with new information</li> <li>• Updated Pillars and USPs</li> </ul> | Adrian Dixon |
| 0.0.7 | 23/10/24 | <ul style="list-style-type: none"> <li>• Filled out the Level section (Design, Aesthetic and Narrative)</li> <li>• General formatting updates</li> <li>• Added to SFX</li> <li>• Updated all uses of the word pillagers to pilgrims, to keep consistency</li> </ul>  | Damon Reid   |
| 0.0.8 | 24/10/24 | <ul style="list-style-type: none"> <li>• Added more clarification to the SFX Section</li> </ul>  | Damon Reid   |
| 0.0.8 | 24/10/24 | <ul style="list-style-type: none"> <li>• Added and Developed Spectral Abilities</li> <li>• Added Images throughout the document</li> <li>• Developed Art Design section</li> <li>• Added Team Members Section</li> </ul>   | Adrian Dixon |
|       |          |  |              |
|       |          |  |              |

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## Elevator Pitch

Play as Ekko the ghost, who must defend their home from invading pilgrims by constructing towers and managing spectral abilities.

## Game Overview

- Spooky Tower Defense
- Play as Ekko
- High Angle Perspective
- Place towers and use abilities
- Manage your defenses
- Defeat waves of pilgrims and earn trinkets
- Buy towers and upgrades from the shop

## Pillars/USP/Feature List

### Controllable Player

The player character is involved with the defense of their home instead of just observing from a distance away.

### Cutesy Monsters vs Humans

Cute monsters vs humans: Subverts the protagonist and antagonist roles of humans vs monsters.

### Strategic Management

Levels will require thought and strategy to complete, managing towers, abilities, and player positioning.

## USPs

**Cutesy Monsters vs. Humans**

**Game is centred around travel as much as defenses.**

**The player is active and involved within the level itself.**

## Features

- 8 directional movement
- Tower building
- Spectral Abilities
- Strategy
- Upgrades
- Management of towers and currency

## Setting Overview

Ekko is the owner of a manor in the year of 1692. This manor is a safe haven for the occult, hosting many ghosts, witches and other supernatural creatures.

A nearby village of pilgrims are a superstitious lot who are afraid of the occult forces that reside within the estate, which the pilgrims will try to storm in order to flush the occult out.

## Characters

### Ekko



- A ghost who has a lot of occult friends
- Was a man named Edward Duvall when he was alive
  - Edward Duvall means “Protector of the Valley”
- Was an artificer when he was alive
- Approaches everything strategically

- Used to live in the village that the Pilgrims inhabit
  - Was driven away from the village
- Courageous

## The Pilgrims



- Superstitious
  - Very stubborn and close-minded
- Always looked down upon Edward's family
- Believes that the residents of Ekko's manor are evil
- Cast Edward Duvall out of their village due to misunderstood practices

## Sybil

- Self-taught witch
- A cat who takes on a more human form in order to communicate with others
- One of Ekko's friends
- Resourceful witch that always keeps track of the castle's supplies
- Always happy to help, but for a price
  - Requires resources in order to fuel all the magic energy spent manifesting towers and abilities
- Has a twin sister named Ciana who helps out at the store

## The Occult

- Ghosts from varying time periods
  - Can be indicated via hats or props that some of the ghosts could have?



- Consists of Ekko's ancestors and friends
- Helps Ekko defend the manor by manning some of the towers
- Gargoyle towers are also sentient
- Various other monsters are hinted at
  - Vampires
  - Werewolves
  - Witches

## Milestones

### Pre-Production

- First draft of documents
  - Game Design Document
  - Art Bible
  - Technical Design Document
- Finalisation of overall game concept
- Very basic prototypes
  - In order to get the ideas across about camera placement, greyboxed level, tests for the various gameplay systems

### Alpha

- Due 8/11/24
- A build with all the basics functioning
  - Simple tower placement
  - Base tower / enemies
  - Placeholder textures
  - Simple shop system
- Consideration of any plausible stretch goals
- All core features locked down
- Testing

### Beta

- Due 22/11/24
- Polished product
- Most - if not all - textures, assets, and mechanics in the game
  - including any chosen stretch goals
- Further testing

### Gold

- Due 6/12/24
- Finished product

- Final tests to make sure everything runs smoothly and as intended

## Gameplay

### Overview

*Guardian Spirit* is a cutesy spooky tower defense game where the player assumes the role of the ghost, Ekko, to protect their family estate. Using the towers and abilities at their disposal, Ekko must traverse the estate and construct towers to repel angry pilgrims from invading and claiming the manor as their own. More towers and abilities can be purchased from the shop, allowing Ekko to take on increasingly difficult waves.

### Controls

| Keybinds | Action  |
|----------|---|
| WASD     | Movement  |
| F        | Interact/Build                                      |
| LMB      | Click Menus/Place Abilities                         |
| RMB      | Ability 1 (Spook)                                   |
| Q        | Ability 2 (Mines) [Press again to toggle mode]      |
| E        | Ability 3 (Ecto Spill) [Press again to toggle mode] |
| Space    | Dash  |
| Shift    | Dash  |
| 1-9      | Tower Select  |
| Scroll   | Tower Select  |
| Enter    | Select Menu Option                                  |
| ESC      | Pause Menu/Back                                     |

## Systems

### Player Role

The player takes the role of Ekko and must traverse around the map to place down towers in strategic positions and fend off the waves of pilgrims. However, as a ghost, the player cannot attack the pilgrims directly. On the flip side, they also cannot be harmed by the pilgrims.

The player can use simple spectral abilities against the pilgrims to help their towers out, such as stunning the pilgrims in place or blocking them off temporarily. They can also dash to traverse the map faster. These abilities can be upgraded or unlocked in the shop.

## Tower Placement, Upgrades, and Deconstruction

Ekko can approach empty bases and set up towers in strategic positions to defend their home. Each tower has a currency cost to build, and increases or decreases depending on the tower type. A tower takes 2s to activate before it starts targeting and firing.

A tower must be selected on the UI for the player to place it down. When they approach a placement node, a spectral preview of the selected tower will display, and can be placed with F.

Towers are upgraded individually

Deconstructing a tower refunds the player the cost of the base tower. Upgrades are lost and not refunded.

## Spectral Abilities

- *Dash* unlocked by default
- Purchase more from store
- *Spook*
  - Scare and stun enemies briefly
- *Monster Mines*
  - Place mines upon the floor that damage the enemy
- *Ectoplasm Spill*
  - Spill ectoplasm on the floor that deals DoT damage enemies for 10 seconds

## Fending off Enemies/Waves

Enemies follow a single lane from their spawn position to the castle's front door. This front door has a set amount of HP, and when destroyed, the player loses the game.

Enemies drop currency upon defeat. This varies between 5-50 depending on the enemy type. (The player does not need to pick this up)

The manor itself also fights back if the enemies do end up reaching it, but the player's intervention is necessary to not lose the game.

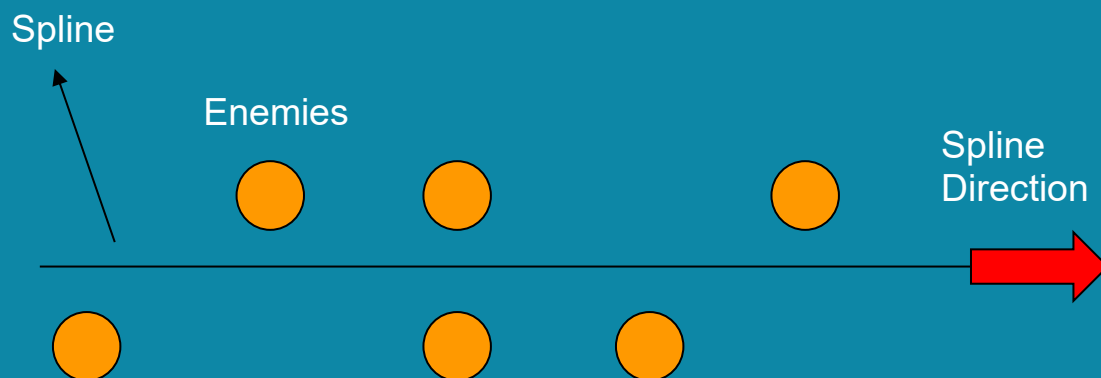
Before each wave, icons will show what types of enemies are going to arrive during the wave. This will inform the player's purchases at the store and how they place their towers.

There is a grace period between each wave for the player to organise and set up their defenses, which they can end when ready.

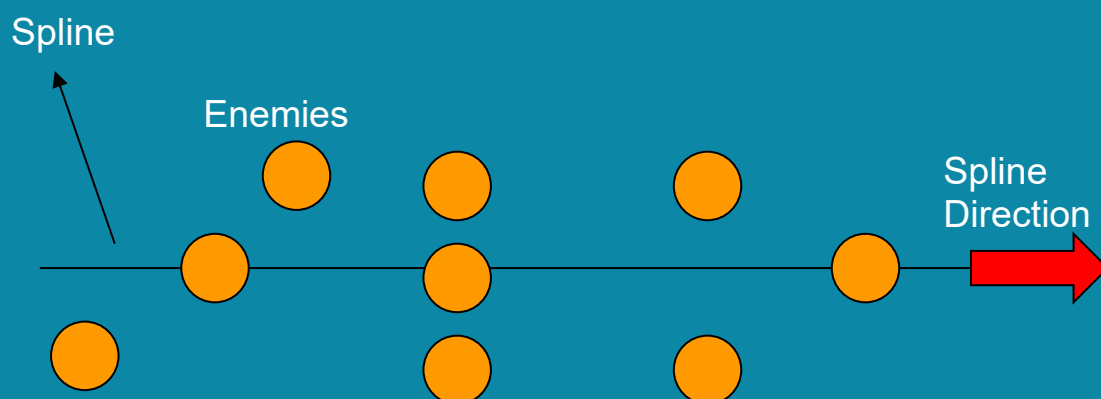
### *Wave Spawn Pattern*

Enemies will spawn in small groups of 6-12 with two spawn patterns. One where they spawn where maximum two enemies will be side by side, and the other spawn pattern where they will spawn a maximum three enemies in a row.

#### *Wave Pattern 1*



#### *Wave Pattern 2*



### *Wave Spawn Intervals*

Each wave will have different spawn intervals, which will make the enemies spawn differently adding variety and unpredictability so that players will not get bored.

## Shop

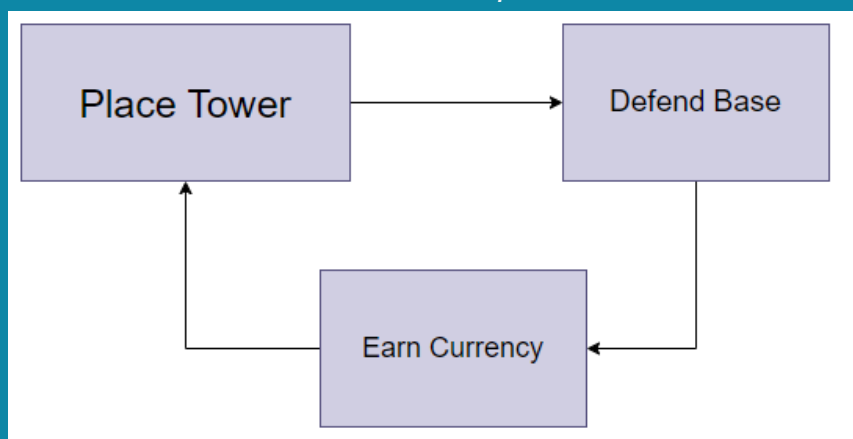
The shop can only be accessed between waves, during the grace period. It is run by a black cat who will exchange currency earned every wave for ability upgrades and more towers to place down.

Towers are purchased before the wave begins, to encourage strategizing and management of tower numbers and placement.

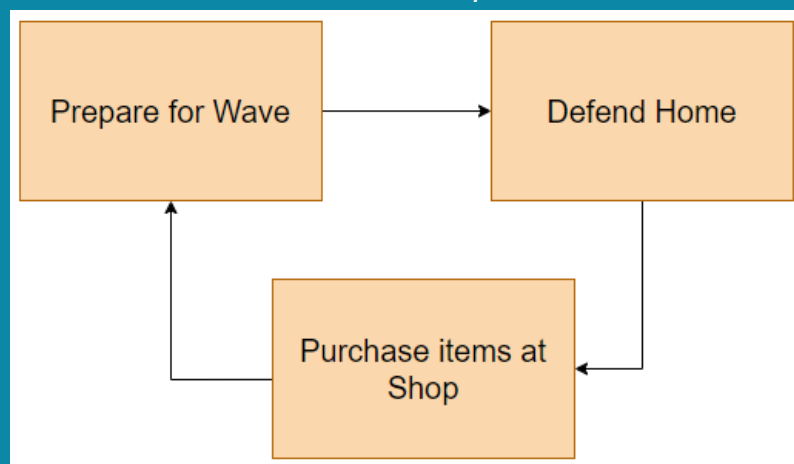
Slight lore from the shopkeeper cat, which can be presented via the shop environment or through dialogue.

## Gameplay Loops

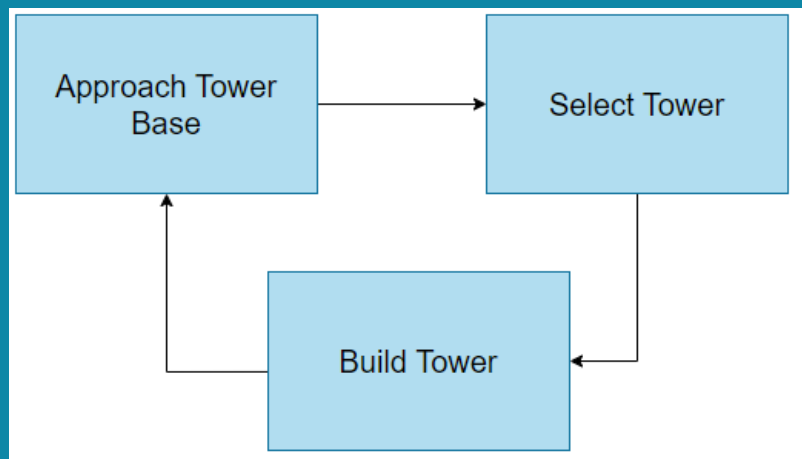
### *Core Loop*



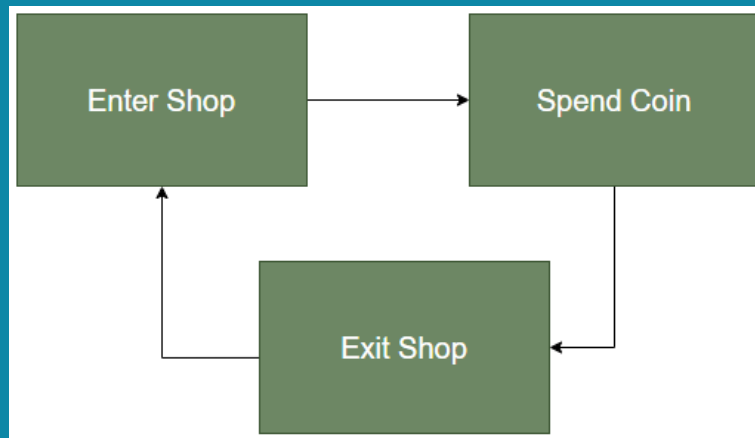
### *Level Loop*



### *Tower Placement Loop*



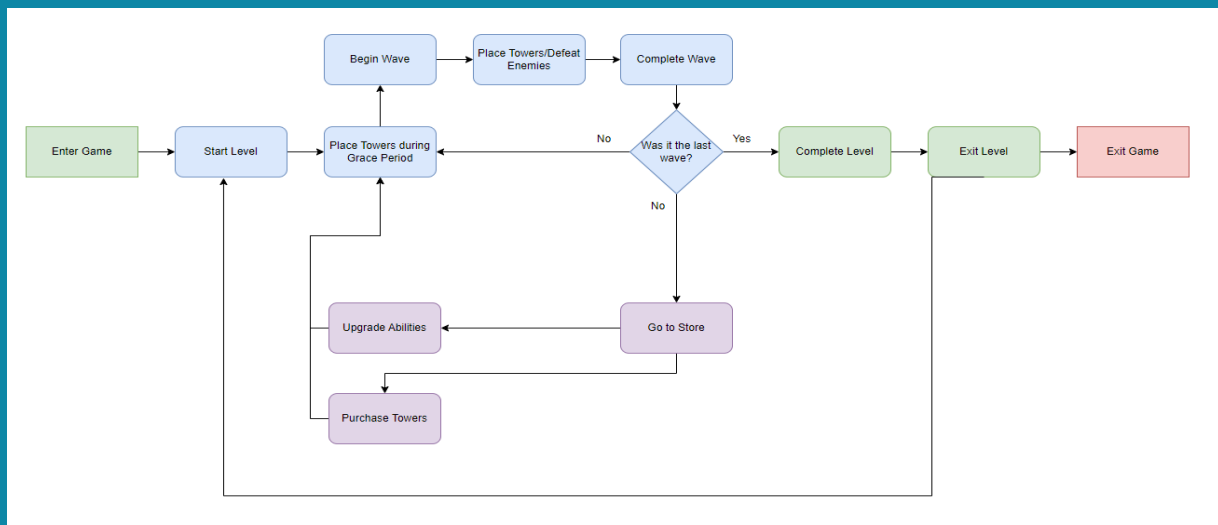
### *Shop Loop*



## Game Loop



## Session Loop



## Towers

| Tower      | Fire Rate | Dmg | Upgrades                |                           |                         |                                    |
|------------|-----------|-----|-------------------------|---------------------------|-------------------------|------------------------------------|
| Ballista   | Standard  | 40  | +20% Damage             | +2s Stun                  | +10% Fire Rate Increase | +3s Stun + Small AoE               |
| Tesla Coil | Fast      | 15  | +25% Damage             | +1 Enemy Arc (50% Damage) | +15% Fire Rate Increase | +2 Enemy Arc                       |
| Gargoyle   | Slow      | 90  | +10% Fire Rate Increase | + Fire DoT                | +20% Damage             | + Fire DoT Damage + 30% AoE Radius |

| Tower Upgrade Costs (After Shop Unlock) |                |         |         |         |         |
|---|----------------|---------|---------|---------|---------|
| Tower                                   | Level 1 (Base) | Level 2 | Level 3 | Level 4 | Level 5 |
| Ballista                                | -              | 300     | 400     | 500     | 600     |
| Tesla                                   | -              | 375     | 500     | 625     | 750     |
| Gargoyle                                | -              | 575     | 775     | 975     | 1175    |



| Tower Upgrade Visuals |                  |                           |                      |
|-----------------------|------------------|---------------------------|----------------------|
| <b>Ballista</b>       | Lvl 1 - Standard | Lvl 3 -<br>Rangefinder(?) | Lvl 5 - Arrow Rack   |
| <b>Tesla</b>          | Lvl 1 - Standard | Lvl 3 - Extra Coils       | Lvl 5 - Battery Pack |
| <b>Gargoyle</b>       | Lvl 1 - Standard | Lvl 3 - Blue Flame        | Lvl 5 - Purple Flame |

## Enemies

| Enemy Name                    | Health | Mvmnt<br>Speed | Atk Speed | Dmg | Trinket<br>Drops |
|-------------------------------|--------|----------------|-----------|-----|------------------|
| <b>Pilgrim<br/>(Standard)</b> | 60     | 2.0m/s         | Standard  | 35  | 15-25            |
| <b>Peasant (Light)</b>        | 25     | 2.25m/s        | Fast      | 20  | 5-10             |
| <b>Puritan (Heavy)</b>        | 150    | 1.5m/s         | Slow      | 65  | 30-50            |

## Ghost Abilities

| Spectral<br>Ability    | Effect  | Cooldown | Upgrades             |               |                     |
|------------------------|---|----------|----------------------|---------------|---------------------|
| <b>Spook</b>           | Stun enemies in fear for 5s (stun c/d shared with Ballista)           | 15s      | + Tower Boost Effect | +3s Duration  | -5s Cooldown        |
| <b>Monster Mines</b>   | Deal explosive AoE damage when stepped on (2 second arming time)      | 60s      | +1 Stack             | + Stun Toggle | -15s Cooldown       |
| <b>Ectoplasm Spill</b> | Summon ectoplasm to spill upon the ground and deal DoT damage for 10s | 45s      | + Slow Toggle        | -15s Cooldown | +20% Area of Effect |
| <b>Dash</b>            | Dash a short  | 10s      | +1 Dash              | +1            | -5s                 |

|  |                          |  |  |                        |          |
|--|--------------------------|--|--|------------------------|----------|
|  | distance to move quicker |  |  | Destination Detonation | Cooldown |
|--|--------------------------|--|--|------------------------|----------|

| Manor       |             |     |   |
|-------------|-------------|-----|---|
| Name        | HP          | DMG | Notes                                   |
| Manor Doors | 750         | 25  | Fires slightly slower than the Gargoyle |
| Manor Tower | Unbreakable | 50  | ^^                                      |

## Shop Purchases

| Shop            |      |               |     |     |                |
|-----------------|------|---------------|-----|-----|----------------|
| Item            | Cost | Upgrade Costs |     |     | Upgrade Unlock |
| Ballista Tower  | 200  | -             | -   | -   | 300            |
| Tesla Tower     | 250  | -             | -   | -   | 350            |
| Gargoyle Tower  | 375  | -             | -   | -   | 500            |
| Dash            | -    | 300           | 350 | 400 | -              |
| Spook           | 150  | 250           | 350 | 450 | -              |
| Monster Mines   | 300  | 450           | 600 | 750 | -              |
| Ectoplasm Spill | 200  | 300           | 400 | 500 | -              |

## Level

### Design

The Manor is located in the Southwest corner of the map, and the Pilgrims' village is located in the Northeast.

The level progresses southwest from the pilgrims' village, winding through a forest, a graveyard, then the grounds of Ekko's manor. The pilgrims will stick to the winding path only, while Ekko can move all around the map. Ekko can also use a portal to travel across ends of the map to reach the action quicker as well as return to the manor for easy shop access.

### Aesthetic

The level starts out close to the pilgrims' village, where colour is more earthy and warm. As the pilgrims move towards Ekko's manor, they will pass through different zones such as the forest and graveyard. The colour tone will go from a warm palette to a cooler palette that reflects Ekko's occult faction.

Assets will go from pilgrim assets to manor assets depending on how close the player is to the Manor or the Village.

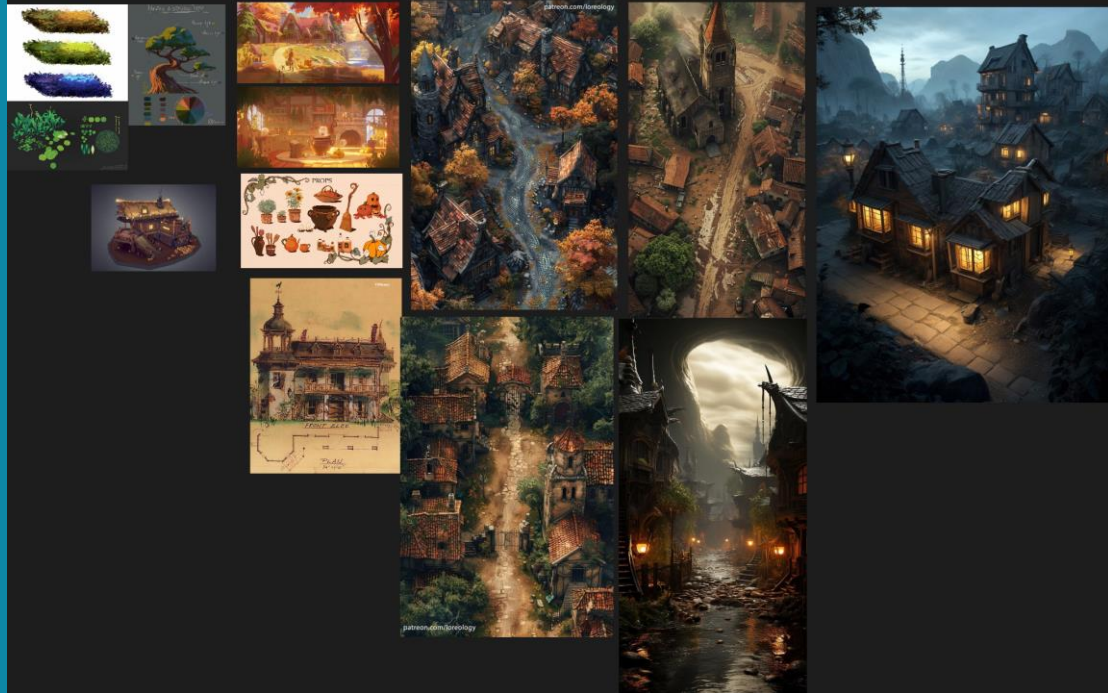
### Narrative

The pilgrims, having enough of Ekko and his mystical menagerie, have decided to storm his manor to drive the occult out. Supplied with the weaponry required from the shopkeeper Sybil, Ekko and his friends mount a defence of the manor to repel the encroaching pilgrims.

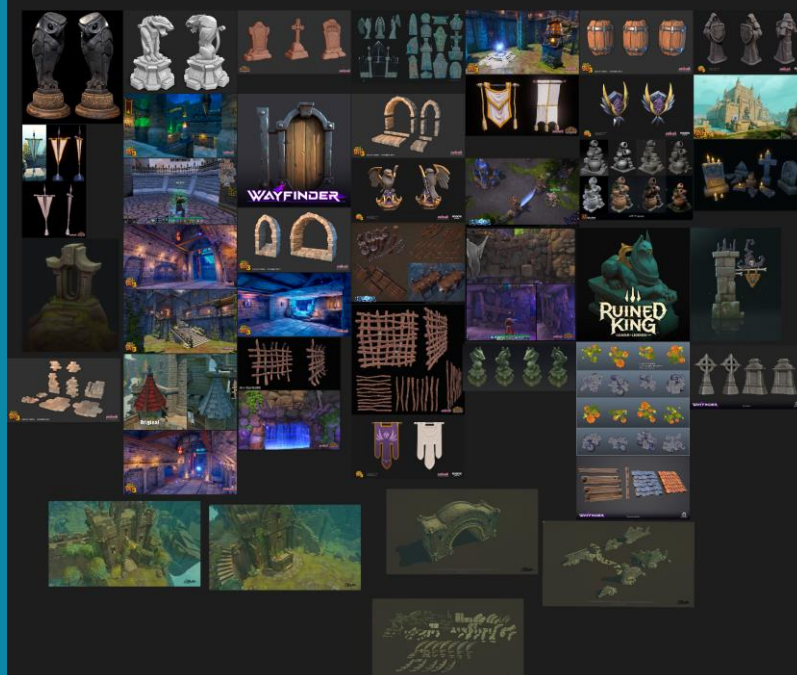
# Look and Feel

Moodboard/References

## Colour/Mood Reference



## In Game Props and Reference





## Art Influences

- Orcs Must Die Series (*Robot Entertainment*, 2011-2020)
- Fortnite (*Epic Games*, 2017)
- Sea of Thieves (*Rare*, 2018)

## Sound Design

### SFX

For the soundscape of the game, the aim is for something that is both lighthearted and otherworldly. Tonal SFX will add to the upbeat nature of the game. Most of the SFX will also reflect the ghostly nature of Ekko's home.

- Ethereal sound
- Tonal
- A gentle soundscape overall
- "OoOooOOoOOo" vibes
- Ghostly chanting

Sound effects and elements will be sourced via SoundSnap, and edited with the Audacity software.

## Music

The music for the game will be upbeat, with a cutesy spooky vibe to it. Instruments like organs / pianos, church bells, theremins and synths will be used to achieve this sound. Lighthearted in tone throughout the entirety of the game.

Electro swing with touches of an organ to serve as a music for the shop.

Music is required for:

- Main Menu
- During the Level
  - Chiller version of the level theme
- Shop
- Win Screen
- Lose Screen
- Boss music (STRETCH GOAL)

The music will be composed in the GarageBand app, using the instruments provided. Musical elements will be sourced from SoundSnap as well, unless there is a way to create a church bell sound within GarageBand. Further edits can be conducted with Audacity.

## Marketing

### Platforms

Guardian Spirit will primarily be developed for a Windows PC release.

### Target Audience

Age: 12+

Gender: All genders

Casual strategy games and tower defense enjoyers

### Market Analysis

Orcs Must Die 2

**Release date:** July 30, 2012 ([SteamDb](#), Accessed Sept 2024)

**Total Estimated Owners:** 1.8m ([Gamalytic](#), Accessed Sept 2024)

**Platform:** Steam, PC

**Developer:** Robot Entertainment

**Revenue Estimate:** \$10,000,000 ([Gamalytic](#), Accessed Sept 2024)

**Target Audience:** 16+ ([Fanatical](#), Accessed Sept 2024)

## Overview

Orcs must Die 2 has been one of the most popular versions of a third person tower defense. The various traps and enemy types with direct player combat add lots of fun, giving players agency over fighting waves of enemies.

## Marketing Strategy

Orcs Must Die 2 was self published by Robot Entertainment. Part of their strategy involved announcement, and launch trailers on youtube. They also included images of the game, a press kit and were able to get reviews of the game in notable review sites such as IGN, PC Gamer, and Game Informer. The game earned a metacritic score of 83 ([Metacritic](#), Accessed Sept 2024).

## Bloons TD 6

**Release date:** December 18, 2018 ([SteamDb](#), Accessed Sept 2024)

**Total Estimated Owners:** 9m ([Gamalytics](#), Accessed Sept 2024)

**Platform:** Steam, PC

**Developer:** Ninja Kiwi

**Revenue Estimate:** \$38,900,000 ([Gamalytic](#), Accessed Sept 2024)

**Target Audience:** 9+ ([Apps.Apple](#), Accessed Sept 2024)

## Overview



Bloons TD 6 is the latest game in the Bloons TD series. It's known for its signature monkey towers, which use monkey's that throw weapons at waves of balloons, as a way to complete the level. The various towers, enemy types, and upgrades allow players to create strategies to play how they would like to.

### Marketing Strategy

Bloons TD 6 was self published by Ninja Kiwi. They did not do much for marketing other than publishing it on their own website, Apple app store, and tweeting it on X. However they did get publicity through review sites such as toucharcade, and reviews on steam. They also included images of the game, merchandise and were able to get reviews of the game in notable review sites such as IGN, PC Gamer, and Game Informer. Though extremely popular, not many game critics have chosen to review it, and thus bloons TD 6 does not have a metacritic score ([SteamReview](#), [AppStore](#), [toucharcade](#), Accessed Sept 2024).

### Plants vs Zombies

**Release date:** May 5, 2009 ([IGN](#), Accessed Sept 2024)

**Total Estimated Owners:** 7.7m ([Gamalytics](#), Accessed Sept 2024)

**Platform:** Steam, PC, iOS/PadOS, Nintendo DS, Playstation 3, Android, Windows Phone, Playstation Via, macOS.

**Developer:** Popcap Games

**Revenue Estimate:** \$16,700,000 ([Gamalytic](#), Accessed Sept 2024)

**Target Audience:** 10+ ([ESRB](#), Accessed Sept 2024)

### Overview



Plants vs Zombies is a cult classic in the tower defense genre. Though it was released in 2009, the original game, and the IP still has a huge fanbase. Originally designed by George Fan, its simple gameplay of placing different plants to defend your lawn against zombies has made it an accessible game for many people.



## Marketing Strategy

PopCap Games chose an interesting timing to release their marketing campaign for Plants vs Zombies. They chose April 1, 2009, and released a music video called “Zombies on Your Lawn”. This caused many to question whether it was an elaborate April’s fool joke, it was later revealed that it was an announcement for their new game.

Their marketing strategy also involved making a free demo version of the game, permitting 30 minutes of gameplay, and they released the game on steam the following year. ([Youtube](#), [Steam](#), Accessed Sept 2024).

# Risk Assessment

## Hazards:

- Eye strain
- Back and muscle damage
- Ear damage
- Burnout and Stress/Anxiety
- File Corruption
- Electrical shocks
- Tripping

## Solutions:

- Scheduled and frequent breaks
- Considering the positioning of self within a chair or proximity to a screen
- Checking the settings of volume and screen brightness
- A variety of different tasks that aren't repetitive
- Frequent saving and backups, as well as multiple backup locations i.e. cloud, external storage, and local storage
- Open communication and open minds to each other and any concerns or required aids
- Checking the surrounding environment for potentially harmful or hazardous objects or object placement