

AFTER SKY

THE BROKEN PLANET

Game Design Document

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Version History

Version1.0: Document created and information added

Section 1. Game Overview

1.1. Game Concept

In a futuristic world where major seismic activity destroys a gravity machine, causing parts of the land to float to the sky, use your skills as a parkour athlete to repair the machine and bring the world back together.

1.2. Game Overview

Scientists have discovered an ancient machine with the ability to control the gravity of objects. After a major seismic event, the machine is destroyed, causing parts of the land to lose their gravity and float to the sky. In *AfterSky*, the player takes on the role of a young orphan parkour athlete who must traverse this broken, futuristic world. S.L.O.T.H. (*Societal Land Organization and Termination Hub*) seek to control the relief efforts to further their public image, giving no care to those in need. As an orphan who lost their family when the islands were first created, they are determined to rescue other survivors from this deadly environment and the Sloth workers and robots.

AfterSky is heavily focused on precise movement and traversal, with enemies being sparse. The player must use various movement options such as sprinting, climbing, sliding, and wall running to traverse the floating islands, collect the gravity machine parts and fix the broken planet.

1.3. Genre

The game is a single player first-person, action adventure platformer.

1.4. Platform

The game is available on Windows and macOS computers.

1.5. Target Audience

AfterSky is made for players looking to challenge their reflexes and split-second decision-making abilities, as well as those looking to test their creative thinking in a fair playing environment.

The player's success is determined by their ability to react to upcoming obstacles while running at a high speed and move skilfully to traverse them, while deciding on the correct route and path to take.

The game is not for players looking for a slow paced experience or one focused on combat.

1.6. Game Feature Set

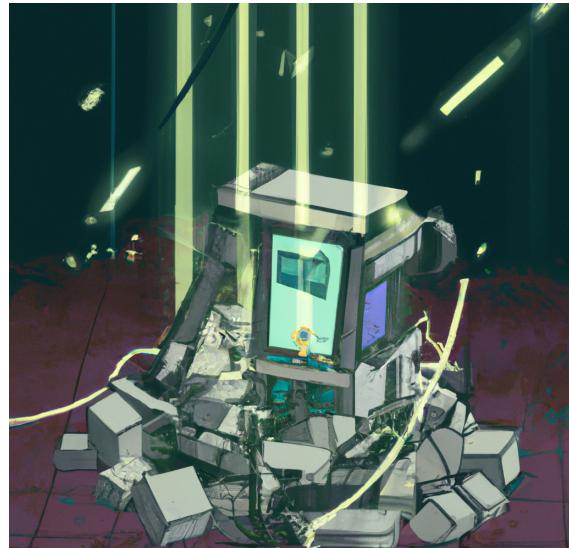
- Single player
- First-person
- 3D World
- Action Adventure Platformer
- Emphasis on precise movement and traversal, with parkour-style gameplay and a range of abilities such as sprinting, climbing, sliding, wall running
- A variety of hazards and obstacles, including environmental hazards, as well as obstacles like puzzles and challenges that require creative solutions.
- A focus on exploration and discovery
- A dynamic and immersive soundtrack that complements the game's futuristic setting
- Minimalistic combat system

Section 2. Story

2.1 Setting & Backstory

In a world where science had advanced to incredible heights, a team of brilliant scientists had been working tirelessly on an ancient machine that can control gravity. Their ultimate goal was to reverse engineer what the ancient civilization knew to make modern advancements.

During one of their experimental tests, a massive earthquake rocked the city, causing the ancient gravity machine to malfunction and implode. Suddenly, parts of the city and surroundings began to float up into the sky, leaving chaos and destruction in its wake.



The protagonist of our story is a young parkour enthusiast named Colli. He had always loved exploring the city, using his agility and quick reflexes to navigate its many obstacles. Now, with parts of the city floating high above the ground, Colli saw an opportunity to put his skills to the test and try to restore the city to what it was before.



He quickly set out to explore the floating islands, leaping from one to another with expert precision. His mission was to gather the scattered parts of the gravity machine and bring them back to the machine, where the scientists are frantically trying to repair it.

2.2 Game story

After the floating islands have formed, Colli sets out to gather the scattered parts of the gravity machine. Along the way, he encounters various challenges and obstacles that require him to use his parkour skills to overcome.

As he traverses through the floating islands, Colli begins to uncover the reason behind the earthquake and the malfunction of the gravity machine, and the evil underlining reason why the S.L.O.T.H cooperation arrived there.

Section 3. Gameplay

3.1. Camera

3.1.1. In-Game Camera

AfterSky uses a first person camera perspective in which the camera is positioned behind the character's eyes, it will be fixed to the player's body, and it will move according to the mouse. This creates a feeling of immersion and realism, as the player is able to view the world similarly to how they would in real life. The player will be able to see down to their body and arms if they look downwards, like in games such as *Mirror's Edge* and *Dying Light*.



Fig 1: Example of the player looking down.
(*Mirror's Edge Catalyst*, 2016)

The camera will have a slight tilt and sway to give a sense of motion and speed when the player is doing actions like running and jumping. The main aim of the camera is to provide the player with a clear view of their surroundings, allowing them to plan their moves, routes and anticipate obstacles in advance.

3.1.2. Player Limbs

As the player moves, the player's view of their limbs changes, and this is what gives the impression of motion. For example, when the character runs, the player's view of their legs alternates between left and right as they take each step and their arms will have a swinging motion. This creates the illusion of movement and helps to immerse the player in the game world.



Fig 2: A first person camera showing motion
(*Dying Light 2 Stay Human*, 2022)

3.1.3. Menu Camera

The camera view for the menus is a static camera, showing the player all the options they can select, easily visible on the screen.

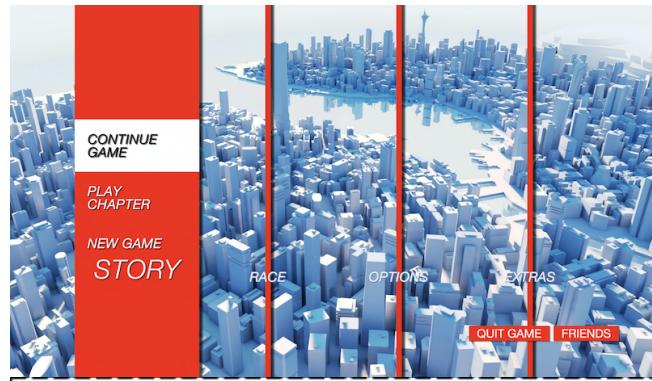


Fig 3: Static menu screen
(*Mirror's Edge*, 2008)

3.2. Player Character

3.2.1. Player movement

In a first person action platformer, movement is the most crucial aspect of gameplay. Therefore, in AfterSky, there are many movement actions to be able to move fluidly and effectively:

- Walk
- Sprint
- Jump
- Wall run
- Grappling hook
- Climb
- Ledge Climbing
- Crouch
- Slide
- Vault
- Wall jumping

3.2.2. Basic movement

3.2.2.1. Walking & Sprinting

The player can walk forward, backward, left and right relative to where they are looking at. The player's speed rapidly increases until it reaches a constant, quick walking speed. This keeps the gameplay fast-paced as the player hardly has to wait to increase their speed, allowing for fast traversal.

Sprinting further increases the player's speed, accelerating until they reach a constant sprinting speed. This allows them to move faster around the world and reach further distances when jumping.

Speed control is an important part of *AfterSky*. The player has to control their speed to have enough speed to jump to other platforms, but not so fast that they run/fall off after landing on it. If the player is moving too quickly, they may not be able to react in time to upcoming obstacles.

3.2.2.2. Jumping & Vaulting

The player is able to jump into the air. If the player is moving in a direction, and they press the jump key, they will jump in the direction they are moving. Additionally, the player is able to adjust his direction while in the air to move to a different direction. The player can jump once and once the player performs a jump they have to land on the ground to perform another one.

If the player is sprinting towards a wall or obstacle that has a smaller height than the player, the player will perform a vault once he collides with the wall. Vaulting allows the player to scale smaller objects quickly, although while vaulting the player will lose some speed. Vaulting is important as it is much faster to vault over several objects in a row instead of repeatedly jumping over them.

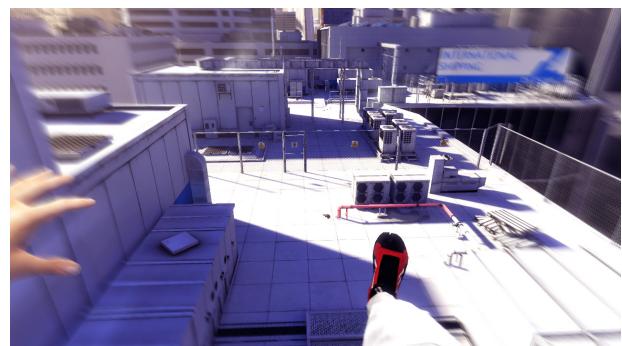


Fig 4: Player jumping in the air
(*Mirror's Edge*, 2008)

3.2.2.3. Crouch & Slide

The player is able to crouch. When crouching, the player bends over to half their height, so they can move under low obstacles. While crouching, the player's speed is greatly decreased. The player can also crouch and move if they desire to move slowly and carefully. Example: going across a high, thin, beam.



Fig 5: Player sliding
(*Dying Light 2 Stay Human*, 2022)

Crouching while sprinting allows the player to slide. This allows the player to go under low obstacles while not losing speed. However, the player can only slide for a certain amount of time and will go back to walking/sprinting/stationary movement after the slide. Sliding down a slope increases the player's speed rapidly above their maximum walking or sprinting speed, depending on how steep the slope is and how long they slide for. After they have reached the bottom of the slope, their speed will decrease until it reaches their

regular walking/sprinting/stationary speed. There is no maximum slide duration when the player is sliding down slopes. If the player performs a slide on a flat surface and does not let go of the crouch key, they will go into a crouch after the slide is over.

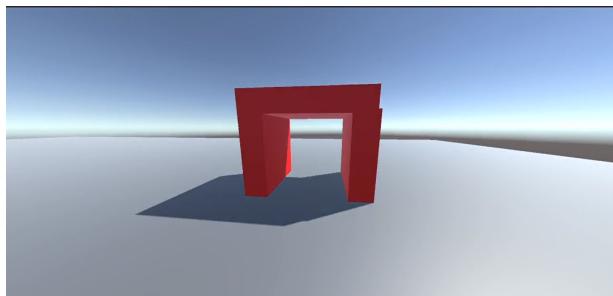


Fig 6: An obstacle the player can crouch/slide under

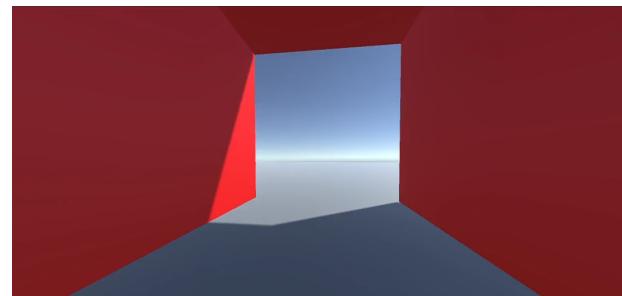


Fig 7: Player crouching to move under the object

3.2.3. Advance movement

3.2.3.1. Wall Climb & Wall Jump

The player can climb up certain walls. They can do this by sprinting or walking forward into these walls. They can only climb up the walls for a certain amount of time, after which they will disconnect from the wall and fall. To initiate a wall climb, the player has to be looking at a wall and be moving towards and into it.

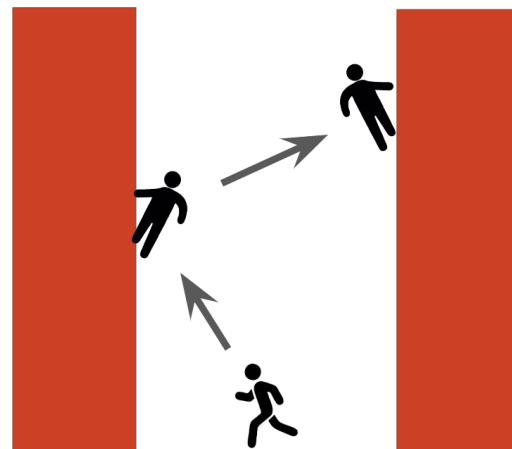


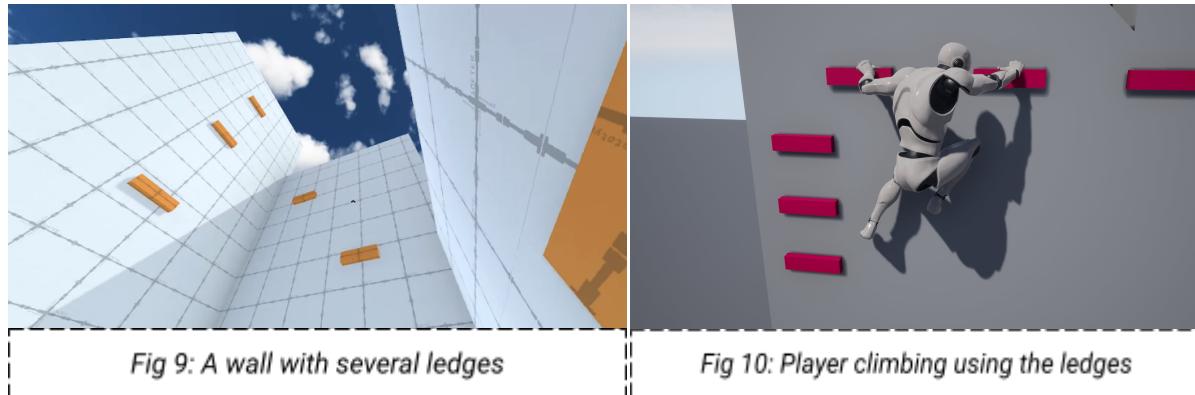
Fig 8: Representation of wall jumping

When the player jumps when climbing a wall, he will move in the opposite direction to the wall. The player can use this to jump away from a wall to another wall, allowing them to climb it. When the player does this, the time they can spend climbing resets when they begin climbing the new wall. This allows the player to climb much higher as long as they can continue wall jumping.

3.2.3.2. Ledge Climbing

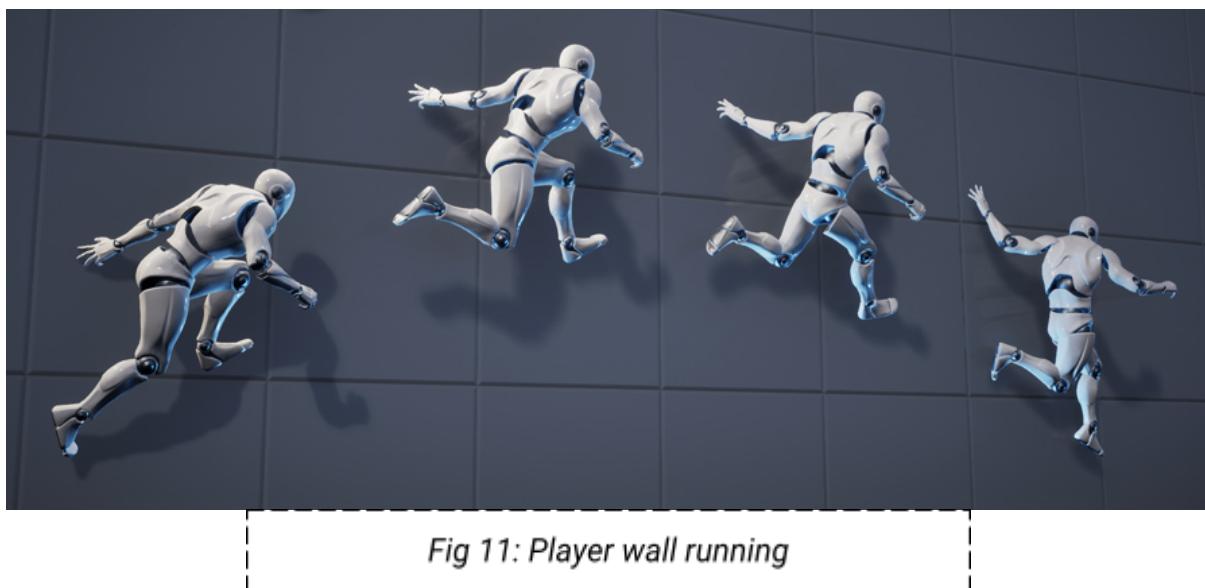
On a wall, there may be several ledges/handholds jutting out of it. While a player is climbing a wall, they can wall jump/climb to a ledge. When they reach the ledge, they will grab onto it, remaining stationary against the wall. When the player grabs onto a

ledge, the time they can climb a wall will be reset, allowing them to continue climbing further up the wall or to another ledge. The player can look around freely while holding onto a ledge and can choose to jump off the ledge to descend as well if they wish.



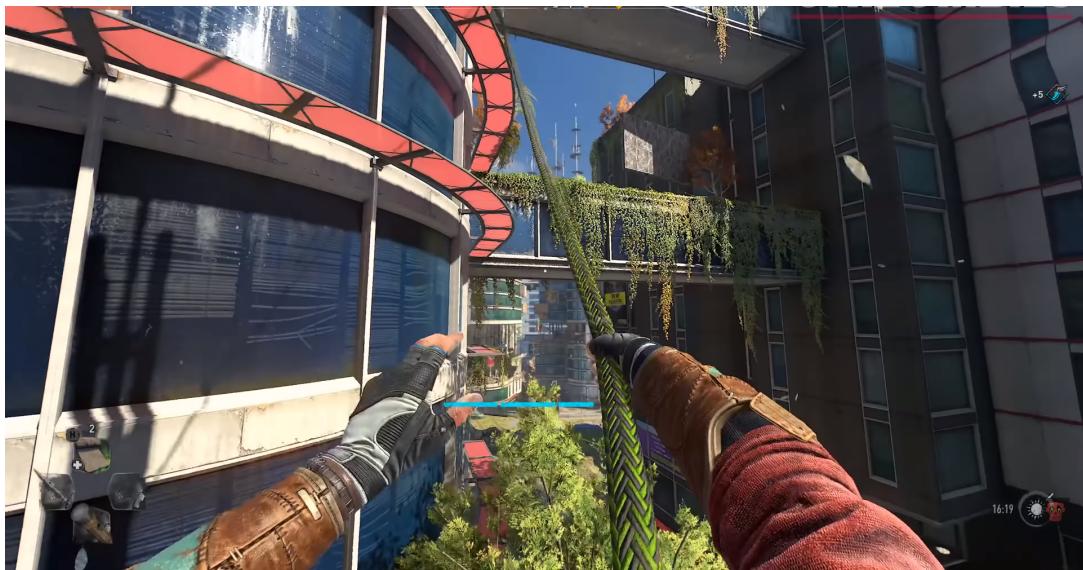
3.2.3.3. Wall Run

Wall running is an advanced movement action that the player can perform by running into a wall at an angle. This allows the player to move quickly forward, staying parallel to the wall. While in a wall run, the player starts to lose vertical height, but their speed will remain constant. The player cannot reverse their direction while wallrunning as this will cause them to disconnect from the wall and fall off. The player can also jump to leap away from the wall into another wall run; to a wall climb; to grab onto a ledge or to fall back to the ground. Wall running can be used to cover big chasms quickly.



3.2.3.4. Grappling Hook

The player can shoot out a grappling hook from their wrist gadget into grapple points (see [3.3.3.2 Grapple Points](#)) to pull themselves towards them. The hook (attached to a cord) shoots out straight to where the player aims it. Upon contact with a grapple point, the hook attaches itself to the object, pulling the player straight towards the object. When the player makes contact with the object, the hook and cord detach from the object and retract away into the player's wrist gadget. This allows the player to quickly use the grappling hook again or to begin other movement options such as ledge grabbing, wallrunning, wall climbing, wall jumping etc if the grapple points are near/in walls or ledges.



*Fig 12: Player using a grappling hook
(Dying Light 2 Stay Human, 2022)*

3.2.4. Player Death

The environment in AfterSky floats extremely high above the ground. Therefore, if the player falls off the islands or other floating objects, they will die and respawn at the nearest respawn point ([3.3.1.5 Respawn Points](#)). The player will not have a health bar, and the enemies are meant to push the player off the island.

3.3. Gameplay Environment

3.3.1. Islands

The game takes place on floating islands, with other city related objects such as walls and cars being used to connect the islands and to make platforms in between them. In order for the player to complete the game, they will need to travel to and from the islands.

3.3.1.1. Tutorial Island

The tutorial island will have one of each terrain type so that the player can get used to each terrain option and know how each movement ability works. After the player finishes the tutorial island, he will arrive at the hub.

3.3.1.2. Hub

The hub is the place where the player will first see the broken gravity machine, in the hub, the player will be able to see the two other islands that they need to get to in order to fix the gravitational machine.

The hub will have some places for the player to explore, but the main objective is to connect the two islands (where the two machine parts are located) and give the player a reason to backtrack after they collect each machine part. The player can choose which of the two objectives to go to first. After the player has collected and brought back each part to the hub, a combination of ranged and melee enemies will appear in a final attempt to stop the player.

3.3.1.3. First Machine Part Island

The way to the first machine part island will be more focused on precision and climbing, with a focus on verticality in the level design. There will only be a few melee enemies scattered throughout the area on flat ground. The player will only face one enemy before facing 2 or more. This helps the player learn and discover new mechanics and ways to deal with enemies without getting confused or overwhelmed. The NPC workers will be scattered around the world at random, peacefully working.

After getting past all the obstacles and enemies, the player will reach and collect the first machine part, which will be located on its own island. There will be several melee enemies here as a final challenge before getting the machine part.

3.3.1.4. Second Machine Part Island

The way to the second machine part island will be more focused on speed and fluid movement, with the player having to prioritise the sprint, wall running, slide, and grappling hook to get to the second gravity machine piece. In this area, there are ranged, flying enemies in the air. Just like in the first island, the player will only face one enemy before facing 2 or more to introduce players to combat/enemy mechanics if they have chosen to get this machine part first. The NPC workers will be scattered around the world at random, peacefully working.

Just like the first machine part island, after the player gets past all the obstacles and enemies, they will reach and collect the first machine part, which will be located on its own island. There will be several ranged enemies here as a final challenge before getting the machine part.

3.3.1.5. Respawn Points

When the player reaches certain parts of the level, they will trigger a new respawn point. If they “die” while traversing or fighting enemies, they will respawn at the last respawn point they were at. The points will be placed specifically to assist the player when they need to progress through particularly difficult manoeuvres or situations. The respawn points will be marked with graffiti on a wall.



Fig 13: Representation of a respawn point

3.3.2. Walls

Walls are present throughout the game either to block player progression, as an obstacle to be overcome, or as a tool to reach other areas. Short walls can be vaulted over, while larger ones can be climbed or used to wall run.

3.3.2.1. Ledge Walls

Ledge walls are regular walls with ledges jutting out of them, allowing players to grab onto these ledges if they climb up the wall to the ledge or jump onto the ledge.

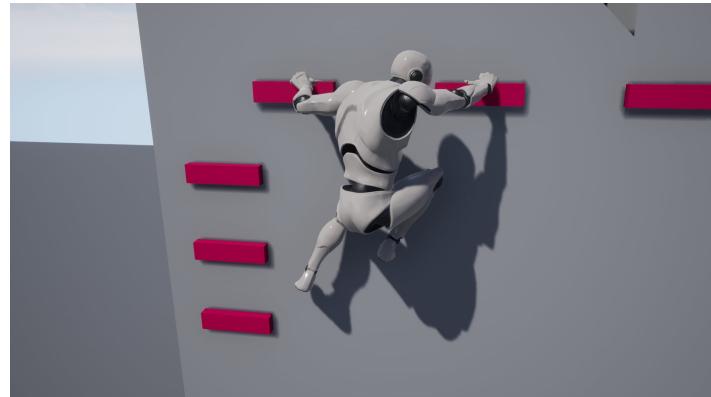
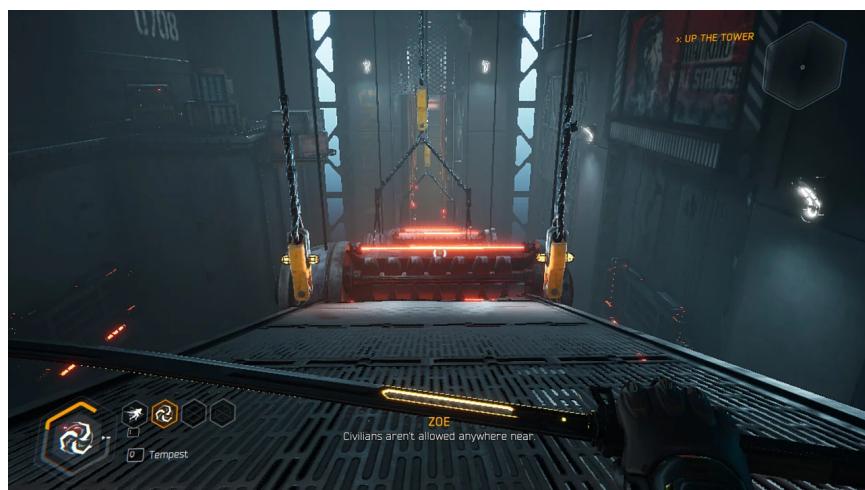


Fig 14: Player climbing a wall using ledges

3.3.3. Special Terrain

3.3.3.1. Slopes

Slopes are flat terrain at an angle to the ground. They can be used to gain massive speed while sliding down them. The player keeps their speed for a while after exiting the slope, which can be used to make much larger jumps to cross large chasms.



*Fig 15: A slope for sliding
(Ghostrunner, 2020)*

3.3.3.2. Grapple Points

Grapple points can be found in walls, ceilings, or as floating objects. Player's can shoot and attach their grappling hook to these points in order to pull themselves toward the points. Grapple points may be located one after another, allowing players to continue grappling.



*Fig 16: A floating grapping point (in blue)
(Ghostrunner, 2020)*

3.3.3.3. Crawl Spaces

Crawl spaces are narrow spaces the player has to crouch to be in. While in a crawl space, the player cannot jump or climb. These spaces are used to pace the player or for creative shortcuts and routes.

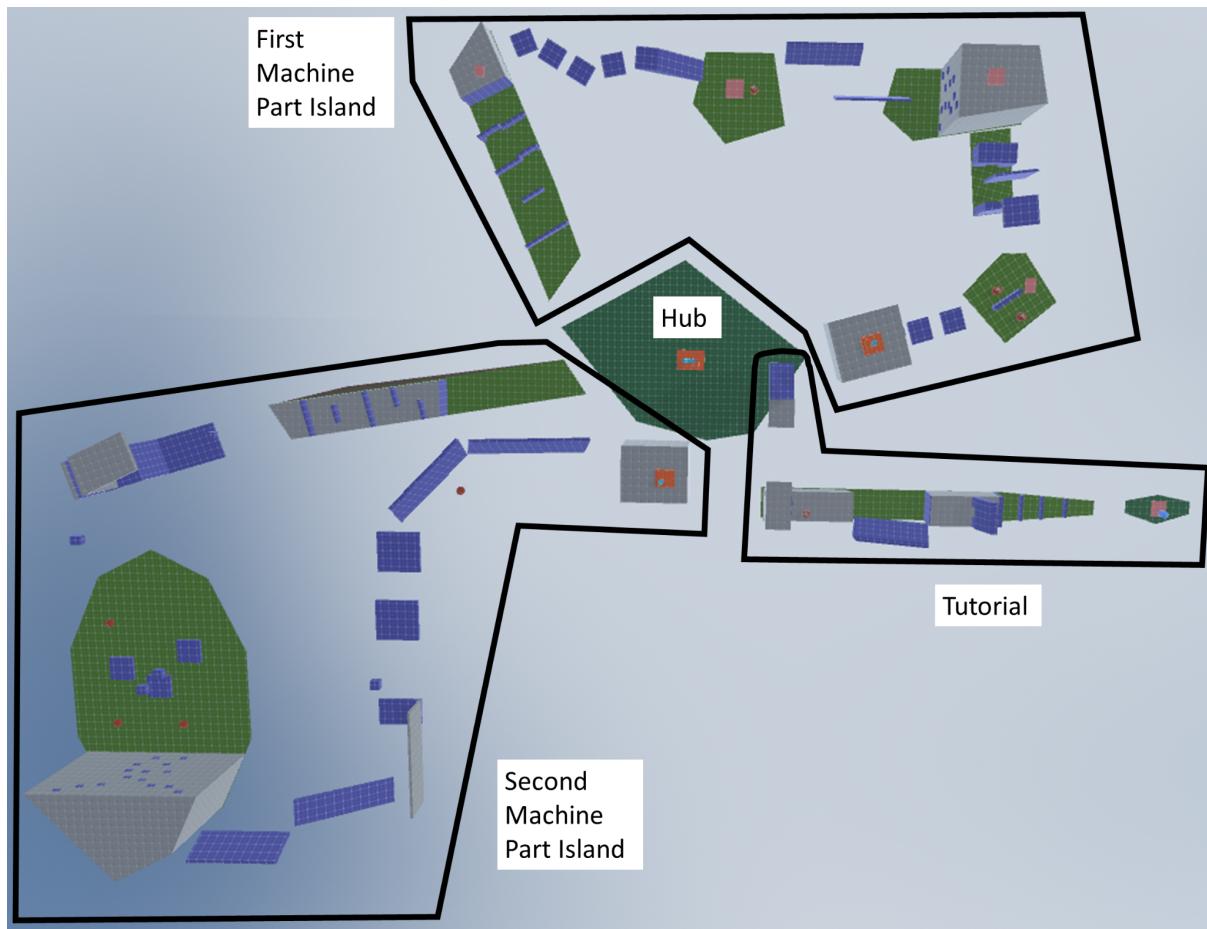


*Fig 17: Crawling through vents
(Mirror's Edge, 2008)*

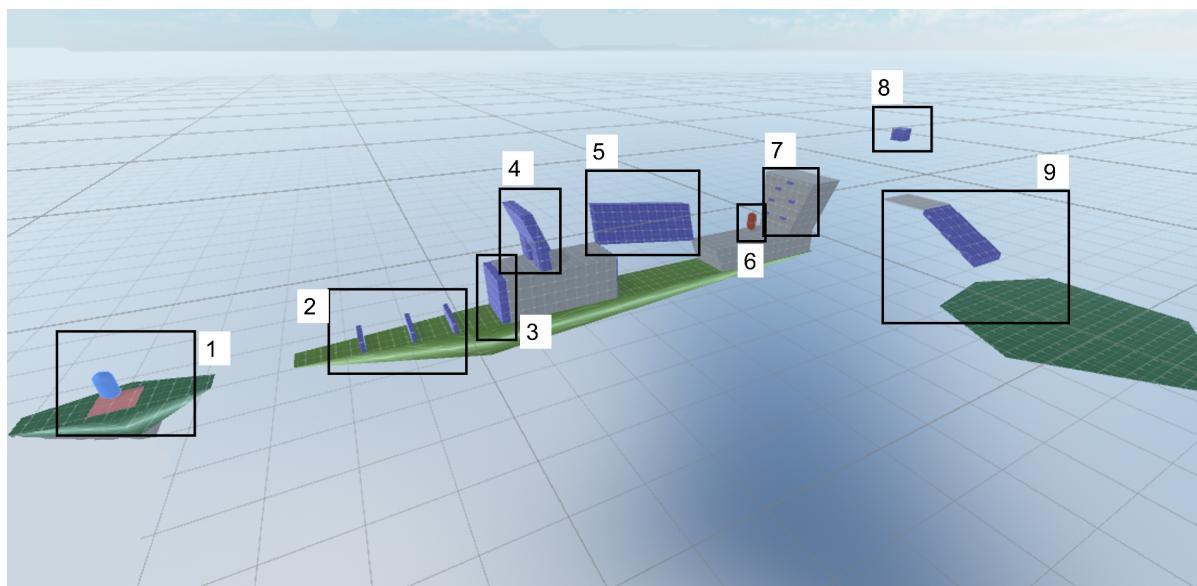
3.4 Level Design

AfterSky is a semi open world in which, after completing the tutorial and arriving at the hub area, the player can decide which path to take, which will lead them to one of the two gravity machine pieces. The level design for AfterSky is represented by the following concept images.

The world as viewed from above:



3.4.1. Tutorial

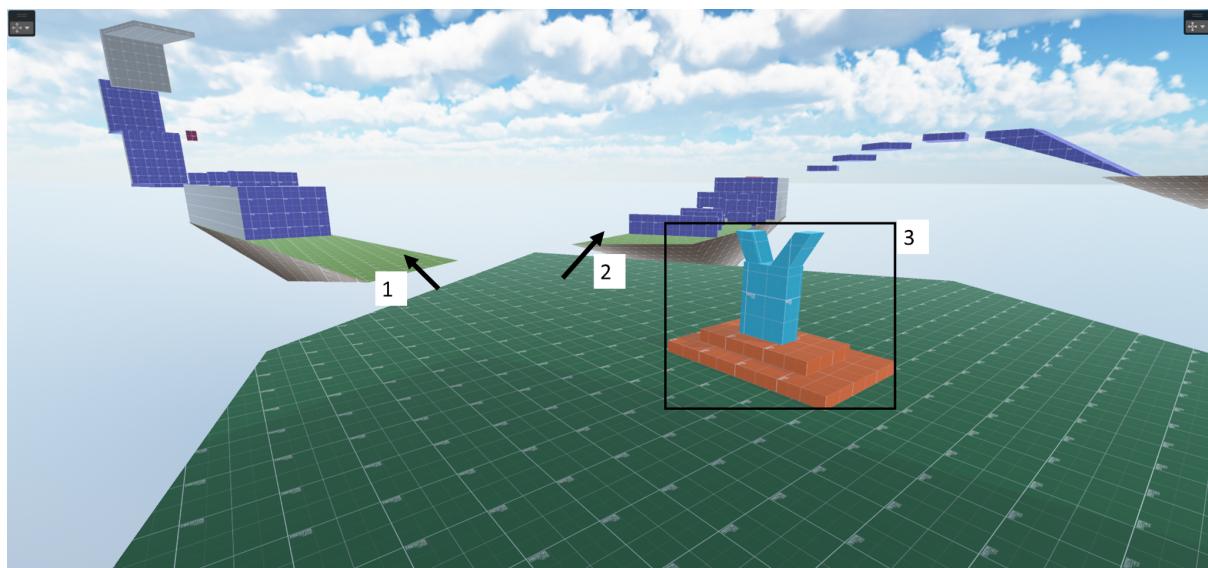


The game begins in this tutorial area. This area introduces the player to all the movement options and types of terrain they will encounter throughout the game. The tutorial stage leads to the hub, and if the player falls off the platforms, they will die and respawn at the beginning (1).

1. The player initially spawns here and will respawn at this location if they die in the tutorial area.
2. Small walls that the player can climb/vault over.
3. A larger wall for the player to climb.
4. A crawl space to crouch and move under.
5. A slanted wall for the player to wall run to the next platform. If they fall off the wall, they can simply climb back to 4 without respawning and try again.
6. A single melee enemy to introduce the player to enemy mechanics.
7. A ledge wall for the player to climb.
8. A grappling point to get the player across the gap to the next platform. The player will use their grappling hook which they learnt about when using it to destroy the enemy.
9. A slope for the player to slide on. This leads to the hub area. The slope is steep and elevated above the ground, so the player cannot go back once they are in the hub area.

3.4.2. Hub

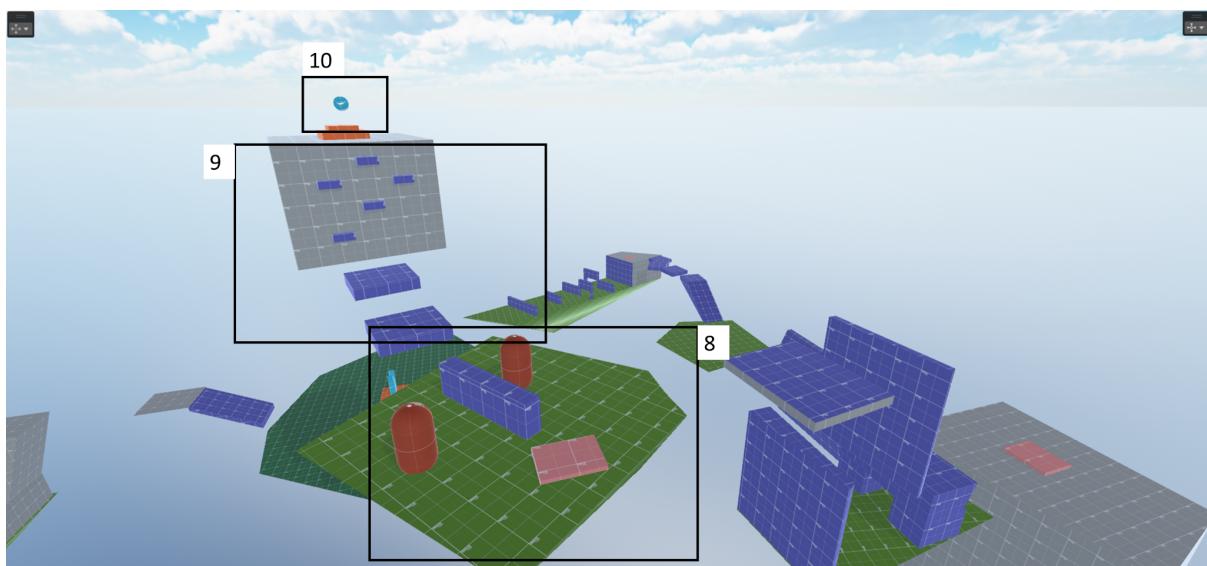
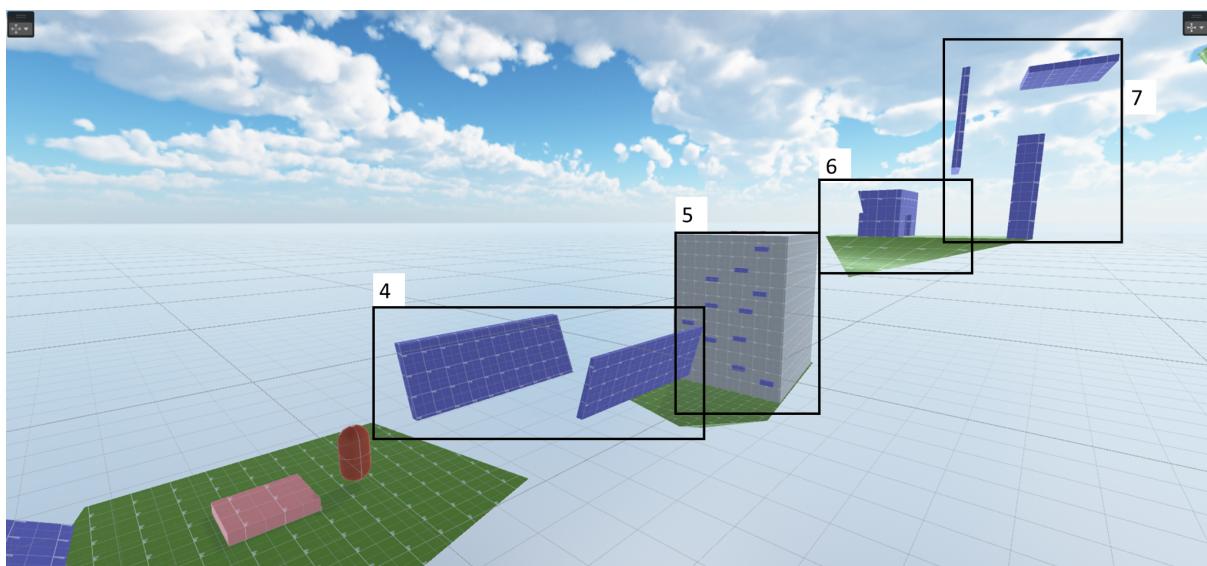
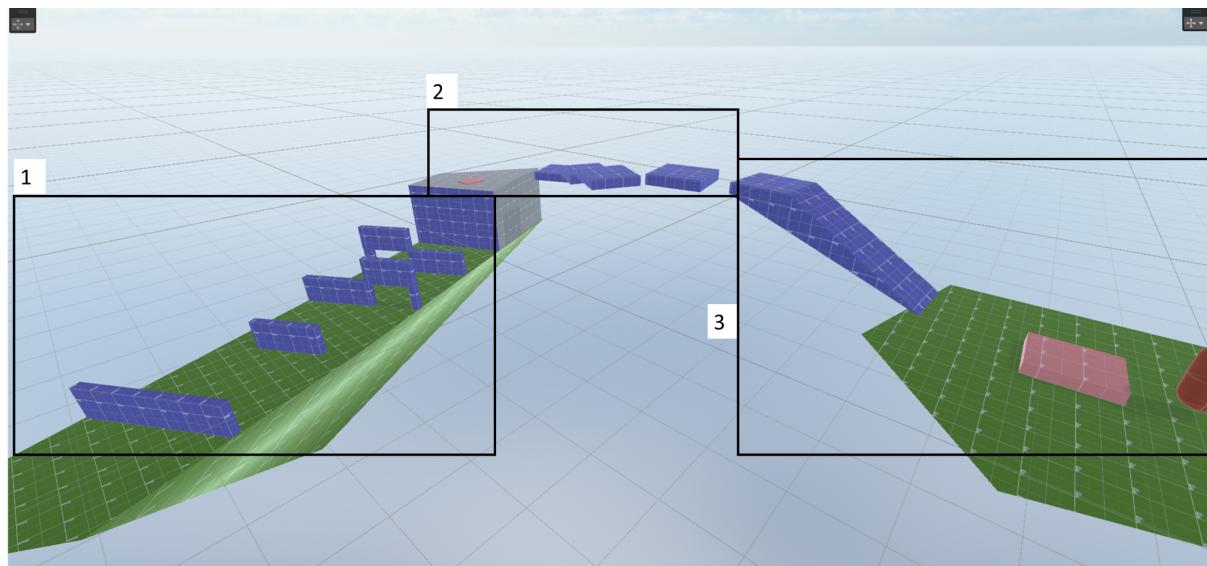
The hub is a central area that connects all areas to each other. As the player can choose which machine part to collect first, the hub area allows the player to backtrack and now collect the other part. After the player has collected and brought back each part to the hub, a combination of ranged and melee enemies will appear in a final attempt to stop the player.



1. The [first machine part island](#) the player can get to after jumping over a gap.
2. The [second machine part island](#) the player can get to after jumping over a gap.
3. The broken gravity machine, missing its 2 pieces.

3.4.3. First Machine Part Island

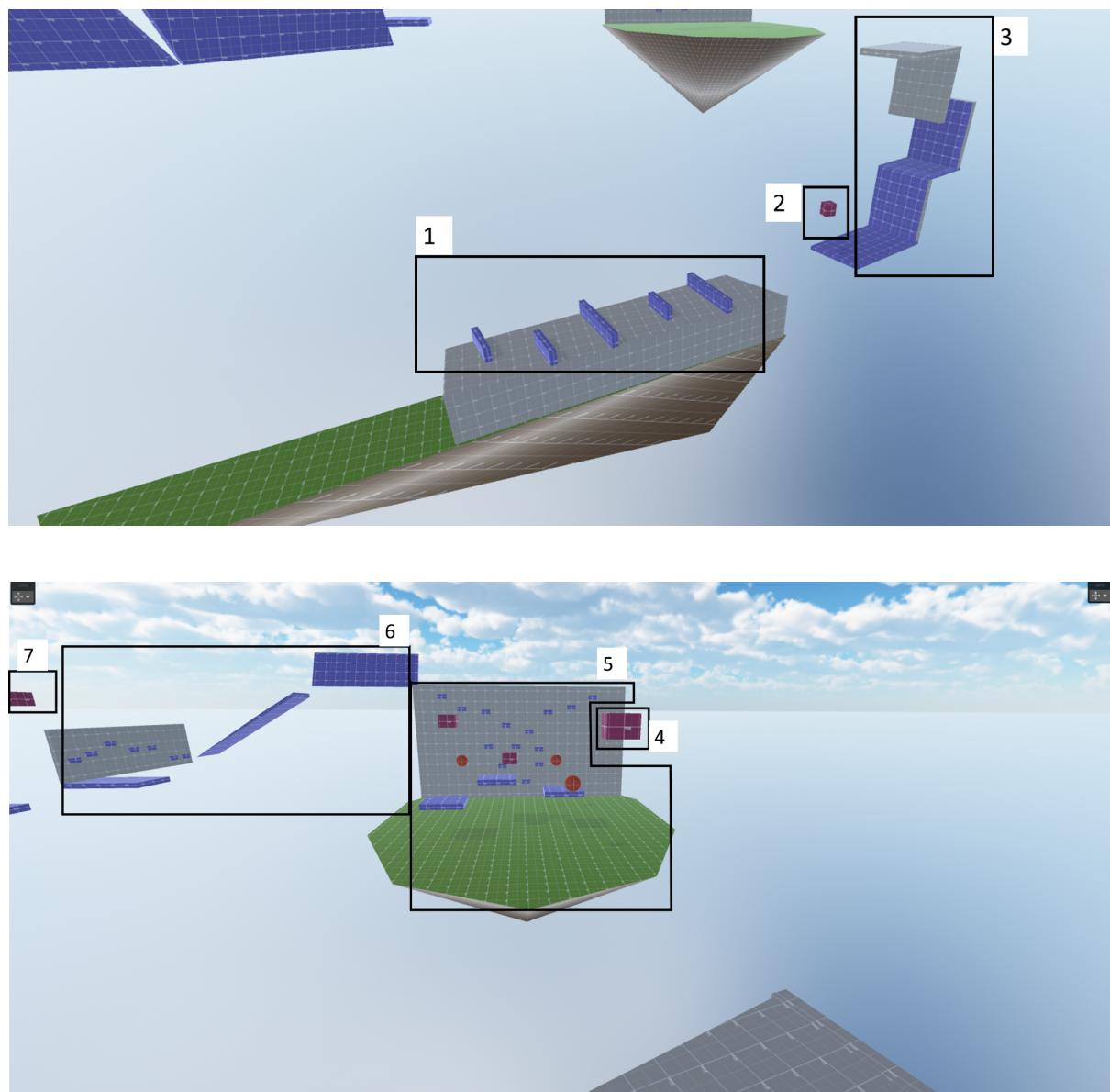
If the player decides to choose this machine part to collect, they will encounter an area with an emphasis on precision and climbing, with a focus on verticality in the level design. After the player has collected the machine part, they can descend by jumping back down to the hub area. If the player falls off the platforms/world with no way of getting back up, they will die and respawn at the last checkpoint they found.

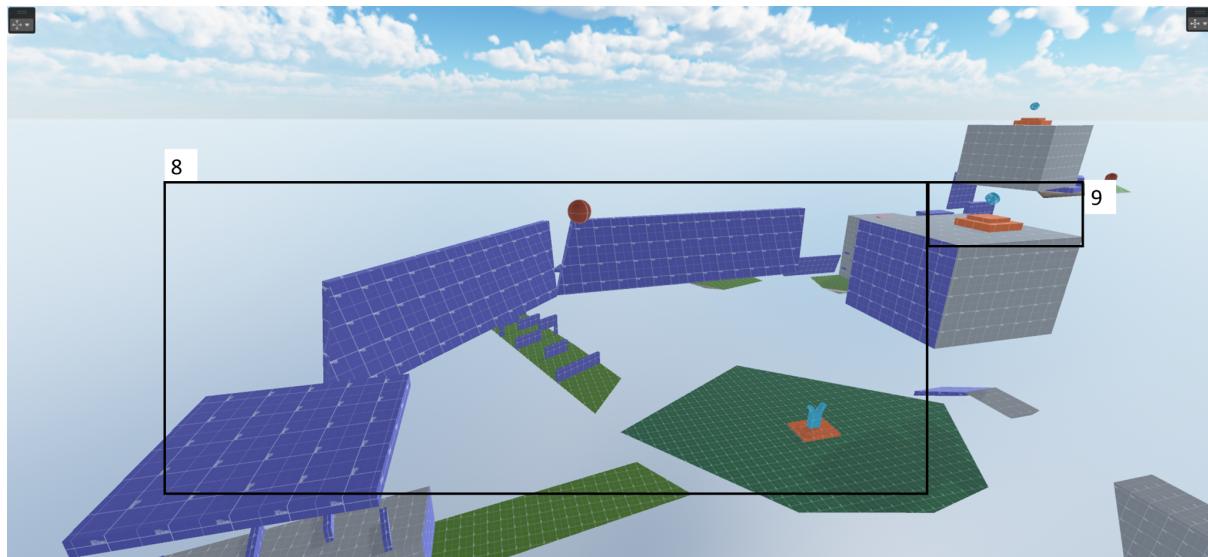


1. A straight area featuring several small walls to vault over and crawl spaces to slide under. In some places, the player can decide whether to vault, crawl, or crawl-slide (sliding is faster and builds up speed).
2. A checkpoint (shown in light red) will allow the player to respawn here if they fall off the following platforms that they have to jump between.
3. An awaiting melee enemy (symbolized by the red capsule) at the bottom of a slope for the player to slide on. Another checkpoint is available to use if they die due to the enemy or any following obstacles.
4. 2 slanted walls to wall run on. The player will have to jump to the second wall to continue the wall run.
5. A ledge wall to climb and reach another checkpoint at the top.
6. A crawl space the player can crawl under after jumping over the gap to get there.
7. A platform the player must reach using the 2 walls and the wall jump manoeuvre.
8. 2 melee enemies (symbolized by the red capsules) for the player to fight, with a checkpoint to help them.
9. A ledge wall the player must jump to and climb after jumping across the 2 platforms.
10. The machine part (symbolised by the hovering blue ring) the player collects, after which some melee enemies appear as a final fight before the player leaves back to the hub by jumping down.

3.4.4. Second Machine Part Island

If the player decides to choose this machine part to collect, they will encounter an area with an emphasis on speed and fluidity, with a focus on moving faster and further in the level design. The enemies are also ranged, flying enemies to further emphasise free and fast movement. After the player has collected the machine part, they can descend by jumping back down to the hub area. If the player falls off the platforms, they will die and respawn at the last checkpoint they found.





1. Several small walls the player can vault over after climbing a wall.
2. A grappling point to cross a large gap.
3. Several walls that can be climbed using normal climbing and wall jumping.
4. A grappling point used to reach the flying enemies on the other side of a large gap.
5. A large area to fight flying enemies (symbolised by the red orbs). The player can use the grappling points and platforms to evade and strike back at the S.L.O.T.H. drones. After defeating the drones, the player can use the ledge wall to climb up to the next obstacle.
6. A slanted wall the player can use to wallrun and jump to the slope which they can slide down and jump to the ledge wall.
7. After using the ledge wall to climb to the platform, the player must use the grappling point to grapple over the gap to the next platform.
8. After grappling, a ranged enemy (symbolised by the red orb) may see and attack the player. They can try to destroy it or consecutively wallrun on two slanted walls to jump onto and climb the wall.
9. The machine part (symbolised by the hovering blue ring) the player collects, after which some ranged enemies appear as a final fight before the player leaves back to the hub. If the player had not destroyed the previous ranged enemy, this fight will be even more challenging.

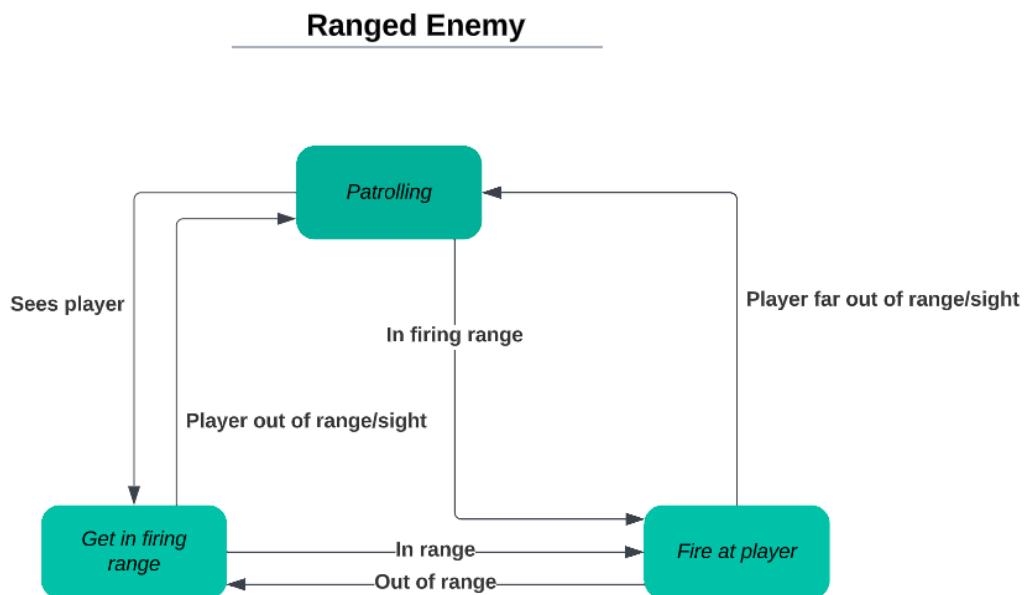
Section 4. Artificial Intelligence

4.1. Enemies

Enemies are S.L.O.T.H. drones that attempt to stop the player from collecting the gravity machine's parts and fixing the world.

4.1.1. Ranged Enemies

The flying drone enemies were made by the S.L.O.T.H. cooperation to eliminate the player.



4.1.1.1. Enemy activity

The drones can fly around the player, shooting force projectiles at them in an attempt to shoot them off the islands. These projectiles push the player with a strong force which can push them off ledges, platforms and walls they might be climbing or wallrunning. The player will have to use all their movement abilities to dodge these projectiles and use the grappling hook to eliminate the drone.

4.1.1.2. Implementation

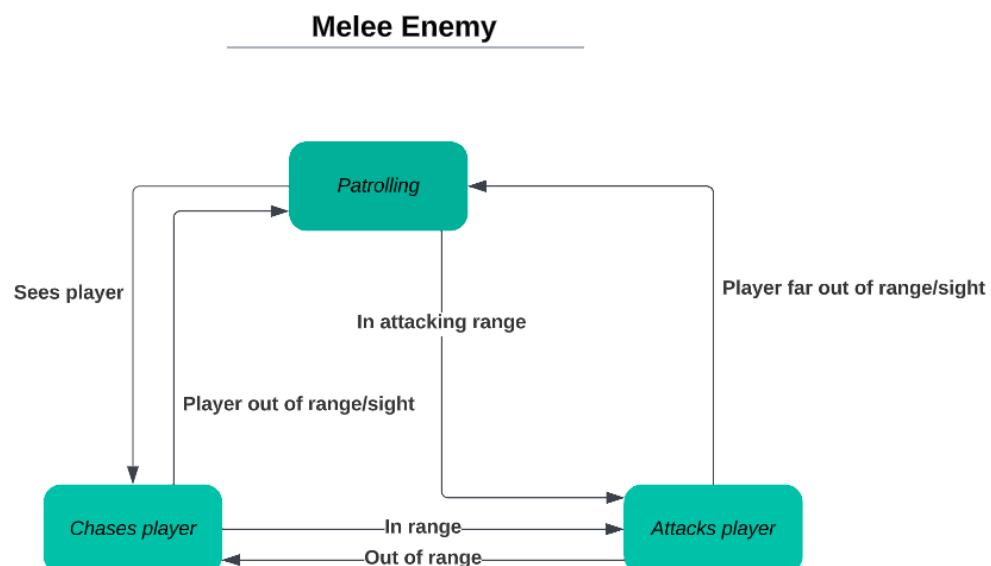
The flying drone enemy will use a finite state machine to determine its behaviour. It has 3 states:

- Patrolling—The initial enemy state in which it flies around a designated area. The patrol path will be made from individual waypoints positioned in the air since the enemy is flying. When the player enters the enemy's line of sight or a certain range, the enemy transitions to the chasing state. If the player escapes the chasing enemy, it will return to this state.
- Chasing—The enemy chases after the player, attempting to get into a close enough range to attack the player. If the player escapes the attacking enemy but remains in a close enough distance to the enemy, the enemy will continue chasing them.
- Attacking—When the player enters a certain, close range, the enemy will shoot at the player. If the player manages to escape the attacking range, the enemy will transition to the chasing state before returning to the patrolling state if the player escapes the enemy completely.

This AI implementation using a finite state machine can create a challenging and dynamic gameplay experience for the player.

4.1.2. Melee Enemies

A robot made by the S.L.O.T.H. cooperation, sent to the islands to stop people from interfering with their work.



4.1.2.1. Enemy activity

The robots patrol a designated path and when they spot the player they will chase them and attempt to push them off the edge. The player will have to use all their movement abilities to dodge these attacks and use the grappling hook to eliminate the robot.

4.1.2.2. Implementation

The melee robot enemy will use a finite state machine to determine its behaviour.

It has 3 states:

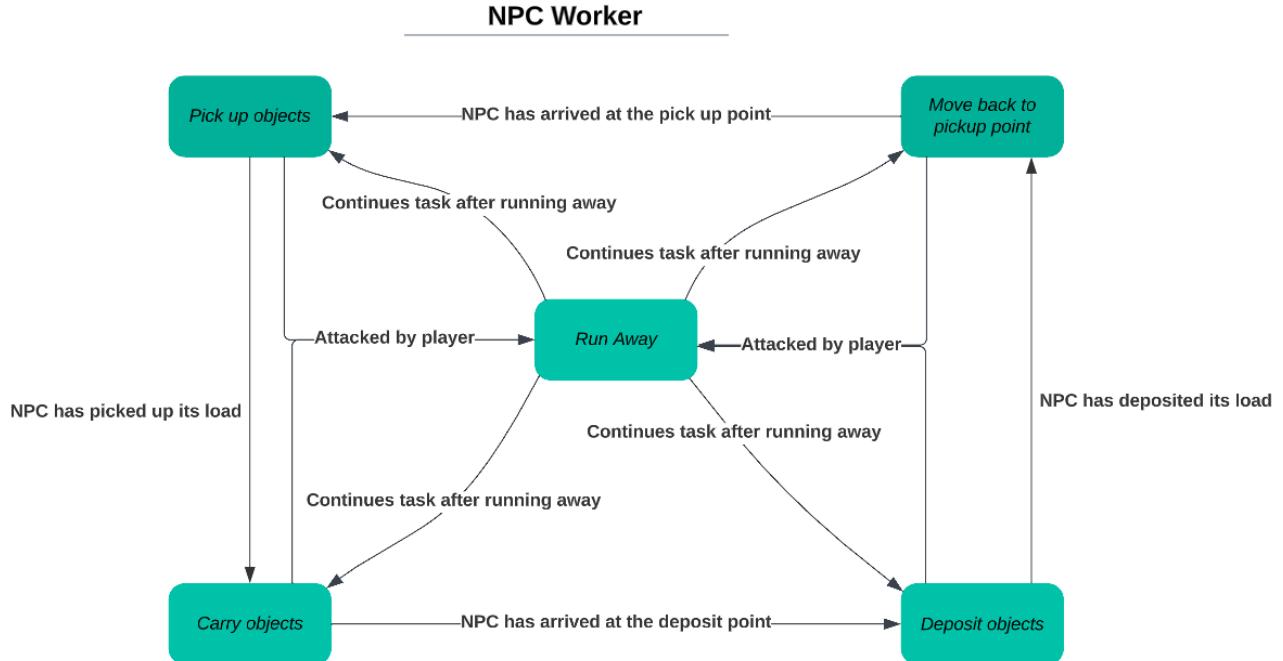
- Patrolling—The initial enemy state in which it flies around a designated area. The patrol path will be made from individual waypoints positioned in the air since the enemy is flying. When the player enters the enemy's line of sight or is within a certain range, the enemy transitions to the chasing state. If the player escapes the range or line of sight of the chasing enemy, it will return to this state.
- Chasing—The enemy chases after the player, attempting to get into a close enough range to attack the player. If the player escapes the attacking enemy but remains in a close enough distance to the enemy, the enemy will continue chasing them.
- Attacking—When the player enters a certain, close range, the enemy will shoot at the player. If the player manages to escape the attacking range, the enemy will transition to the chasing state before returning to the patrolling state if the player escapes the enemy completely.

4.1.2. Damaging the enemies

The only way the player can destroy the drones is by shooting their grappling hook into the drones, which pulls them down, exploding them. When using the grappling hook on drones, the player does not get pulled towards the drones but pulls the drones down instead.

4.2. NPCs

S.L.O.T.H workers doing menial tasks like carrying boxes to places they need to go.



4.2.1. NPC Worker Activity

The NPC robots will walk from one point to another, carrying cargo and dropping it off. If the player hits the NPC, he will run away from the player until the player is a distance away, then the NPC will go back to his original task.

4.2.2. NPC Worker Implementation

The melee robot enemy will use a finite state machine to determine its behaviour. It has 3 states:

- Picking up - Once the NPC arrives at a defined pick up area where cargo is stored (from the returning state), they pick up some cargo in order to carry it to a deposit point.
- Carrying - Once the NPC picks up some cargo, they transition to this state in which they carry the box to the defined deposit location.
- Depositing - After the NPC arrives at the deposit location with the cargo, they transition to the depositing state in which they drop it off and transition to the return state to go pick up some more.

- Returning - After the NPC deposits its cargo at the deposit point, it will move back to the pick up point to transition back to the picking up state and restart the cycle.
- Running away - If the player hits the NPC, it will run away until it reaches a certain safe distance away from the player. After this they will return to whatever activity and state they were in before the player interrupted them.

Section 5. Game User Interface

5.1. In-game UI

While playing AfterSky, there is hardly any in-game UI. This is to increase immersion and allow the player to see everything clearly, as AfterSky requires quick thinking and reflexes to progress. There will only be a small dot in the centre of the screen to show the player exactly where they are looking and aiming their grappling hook. When the player sees a grapple point (see [3.3.3.2 Grapple Points](#)), an icon appears over the point to show the player they can grapple to it.



Fig 18: Grappling point icon (Just Cause 4, 2018)

When collecting the gravity machine parts, a small icon will appear above the part to show the player what key to press to pick up the object or give it to the scientists who are working on fixing the machine.



Fig 19: Pop up interaction prompt icon (Call of Duty: Advanced Warfare, 2014)

5.2. Menu UI

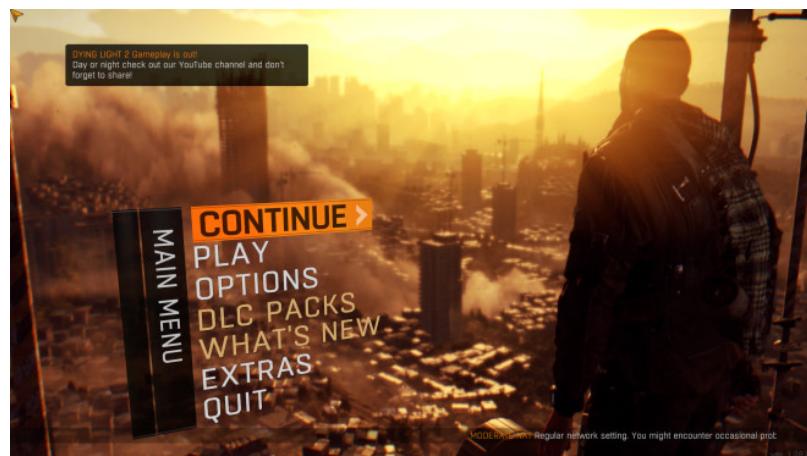
5.2.1. Title Screen

The Title screen is the first thing the player sees when they open the game. On the title screen, the player will be able to see the title of the game and name/logo of the studio that developed it. The screen sets the initial mood and tone of the game for the player.



Fig 20: Title screen (The Last of Us, 2013)

5.2.2. Main Menu



*Fig 21: Main menu screen
(Dying Light, 2015)*



Fig 22: Main menu concept

The main menu is the menu the player goes to after the title screen and includes several options:

- New Game—starts AfterSky from the beginning.
- Options—leads the player to the options menu.
- Exit—closes the game.

5.2.2.1. Options



Fig 23: Options screen concept

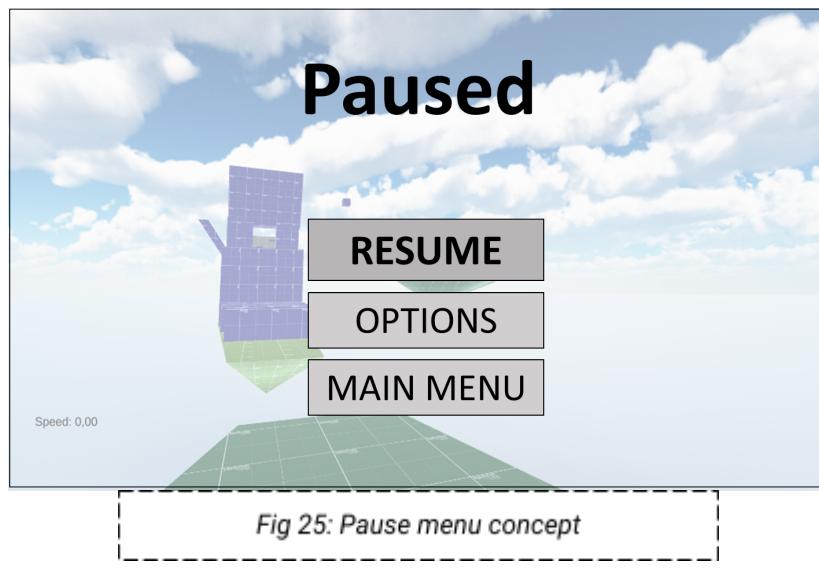


Fig 24: Controls screen (*Bastion*, 2011)

The options menu will include:

- Volume slider—allows the player to increase or decrease the volume of sounds in the game.
- Controls—a section for displaying the controls of the game.
- Display options—a checkbox for switching between full-screen (the game occupies the full display area of the screen) or windowed mode (the game runs in a window which doesn't cover the whole screen and can be resized according to the player's needs).
- Main Menu—takes the player back to the main menu.

5.2.3. Pause Menu



The pause menu will appear when the player pauses the game and will include several options:

- Resume—allows the player to continue playing where they left off.
- Options—opens the [options menu](#) which allows the player to adjust various game settings, such as sound volume, graphics, and control options.
- Main Menu—allows the player to exit the game and go to the main menu.

Section 6. Art

6.1. Art Style

The art style for AfterSky is going to be Low Poly and Sci-fi, drawing inspirations from games/movies like *Super Hot* (2016), *The Outer Worlds* (2019) and *Treasure Planet* (2002). For more information and more references to refer to the Concept Book for more information.

6.2. Assets List

Refer to appropriate sections in the GDD for more information about each asset.

6.2.1. Characters

6.2.1.1 Models

Name of character	Description
Player (Colli)	3D player character model (head not necessary) of Colli the young player character
Melee enemy	3D model of melee enemy robot. Walks and pushes the player with its arms. Part of S.L.O.T.H. (can have logo)
Ranged enemy	3D model of flying enemy robot. Flies around and shoots the player with force projectiles. Part of S.L.O.T.H. (can have logo)
NPC worker	3D model of peaceful S.L.O.T.H. worker robot. Moves around and transports boxes. Part of S.L.O.T.H. (can have logo)

6.2.1.2 Animations

Name of character	Name of animation	Description
<u>Player</u>	Walking animation	Animation of player character model walking
	Running animation	Animation of player character model running/sprinting
	Sliding animation	Animation of player character model sliding as if sliding under an object
	Jumping animation	Animation of player character model jumping (includes falling after the jump)
	Crouching animation	Animation of player character model crouching
	Moving while crouching animation	Animation of player character model moving while crouching (moving on hands and feet)
	Climbing animation	Animation of player character model climbing
	Wallrunning animation	Animation of player character model wallrunning
	Grappling hook animation	Animation of player character model firing a grappling hook from their wrist gadget and being pulled by it
<u>Ranged enemy drone</u>	Flying/hovering animation	Animation of drone flying/hovering (one animation can be used for both these states)
	Attacking animation	Animation of drone shooting a projectile (only the motion of the drone shooting and not an actual projectile being shot)
	Explosion animation	Animation of drone exploding after being destroyed
<u>Melee enemy</u>	Patrolling animation	Animation of enemy walking around
	Attacking animation	Animation of enemy pushing something violently (the player)

	Explosion animation	Animation of enemy exploding after being destroyed
<u>NPC worker</u>	Walking animation	Animation of worker walking
	Picking up object animation	Animation of worker picking up a box (animation will include the box that the worker picks up)
	Walking with object animation	Worker walking while carrying a box (same one it picked up)
	Putting down object animation	Worker putting down a box (same one it picked up)

6.2.2. Objects

Name of asset	Description
Checkpoints	Small wall with graffiti on it saying checkpoint (or something similar to signify a checkpoint)
Grappling hook	Grappling hook with a cable attached to it. Used with the player's grappling animation to grapple to grappling points
Broken machine part	It's a futuristic metallic object that floats with an under-glow.
Gravity machine	An ancient machine with futuristic elements that has a triangle centrepiece for the pieces to be placed

6.2.3. Environment

Name of 3D modelled asset	Description
Ground	Multiple variations of the floors with various materials including pavements, roads, dirt. The ground can be floating
Walls	Multiple variations of walls made of various materials (stone, wood, cement). Walls can be either free-standing or part of a (possibly semi destroyed) building

Slopes	Multiple variations of frailly smooth slopes angled downwards. Can be part of the terrain (grassy/muddy/rocky) or part of a former building/wall
Crawl spaces	Multiple variations of crawl spaces. Possibilities can be: hole in a wall/fence, walls toppled/leaning over, tunnels, vents etc.
Grapple points	The grapple points look like floating, broken street lights
Ledge walls	Variations of the walls with ledges/climbing points sticking out of them. Possibilities can be: naturally formed rock/stone ledges, bricks jutting out etc.
Wallrunning walls	Variations of the walls. Smooth, flat and either straight or angling downwards
Tutorial island	A small circular island with one building, and some foliage surrounding a road
Hub island	Futuristic destroyed city landscape with the gravity machine at the centre and some broken houses and buildings
Objective 1 island	A small and circular floating island with a broken wind turbine and the broken machine piece in the middle of it
Objective 2 island	A small and circular floating island with a tall futuristic building and the broken machine piece in the middle of it

6.2.4. UI Elements

Location	Element	Description
Main menu	Main menu background	A full colour, 1920 x 1080 background image representing AfterSky including the game and studio logo
	Main menu buttons	3 buttons for Start Game, Options and Quit Game respectively. Each button must fit the visual theme of AfterSky and be labelled correctly (Start Game, Options, Quit Game)

Pause menu	Pause menu background	A simple plain semi transparent greyish background that allows the player to still see the game in the background. Must have "Paused" title at the top
	Pause menu buttons	3 buttons for Resume, Options and Main Menu respectively. Each button must fit the visual theme of AfterSky and be labelled correctly (Resume, Options, Main Menu)
Options Menu	Options menu buttons	2 buttons for Controls and Main Menu respectively. Each button must fit the visual theme of AfterSky and be labelled correctly (Controls, Main Menu)
	Options menu background	Background can be the same as the main menu without the game and studio logos. Must have "Options" title at the top
	Options menu slider	A slider (line and icon to be dragged) including a "Volume" label. All elements must fit the visual theme of AfterSky. All elements must fit the visual theme of AfterSky
	Options menu tick-box	A tick/check box (both ticked and unticked versions) including a "Full screen" label
	Controls screen	A screen with every keyboard key and its function. Background, Main Menu button and text must fit the visual theme of AfterSky
Player UI	Crosshair	A simple white dot or + with a black outline to use in the centre of the screen

Section 7. Audio

7.1. Soundtrack

The floating islands of AfterSky create a feeling of wonder and amazement of the foreign, futuristic world. However, there is also a sense of disaster and fear when seeing the effects the gravitational catastrophe has had on the environment and its people. To match these feelings and ideas, the soundtrack is electronic and futuristic with calmer, peaceful tones while the player is exploring or around the hub area of the game and fast-paced to match rapid, dangerous traversal and action.

Music	Description
Menus	<ul style="list-style-type: none">Calm, peaceful, futuristic, electronic musicTechno house, Gqom
Peaceful in-game	<ul style="list-style-type: none">Calm, futuristic, electronic music for peaceful/exploratory momentsSynthwave, Chillsynth, Spacewave
Action/adventure in-game	<ul style="list-style-type: none">Fast-paced, dark, futuristic, electronic music for moments of action and dangerSynthwave, Darksynth, Dark techno

7.2. Sound Effects

7.2.1. Menu Effects

Sound	Description
Button clicked	A simple, realistic button clicking sound
Mouse hovering over button	Whoosh sound

7.2.2. In-Game Effects

Trigger	Description
Moving	A footstep sound that will increase in speed to match the character when they are running
Jumping	A “woosh” sound made by a gust of wind
Sliding	The sound of an object scraping on a grassy or rough surface to mimic the sound of a person sliding down a rough slope
Wall running	A footstep running sound on a flat surface to mimic a person running on a wall
Climbing	A sound of a person climbing/scrambling rapidly up a wall, as the character can climb very quickly in-game.
Grapple hook	The sound of an object being thrown at a high speed (the object whooshing through the air) when the hook is launched, and the sound of metal (the hook) clanging against something when the hook attaches to the grapple point.