

# Overview

This document outlines the environmental and mechanical design framework for a game inspired by the landscapes and cultural environments of Ireland, Scotland, and Iceland. The game exists in two forms:

1. A 2D side-view prototype with distinct stage mechanics rooted in regional environmental behavior.
2. A planned 3D multi-region game that follows the same as the 2D prototype.

A section of historical and landscape research, based on insights gained through guided tours and site visits in these regions, provides additional grounding for environmental choices. The intention is to ensure each region's mechanics, layout, and visual identity feel authentic, intentional, and directly connected to real-world observations.

## 2D PROTOTYPE DESIGN

The current prototype is a 2D side-view platformer composed of three stages. Each stage uses one defining environmental mechanic, inspired by real-world conditions documented in the research section of this report. All stages share baseline systems:

- Individual respawn logic
- Center-placed token objective
- Uniform movement, except where modified by regional rules

### -Ireland-

#### Environmental Basis

Research from the Irish coastline, particularly locations such as the Cliffs of Moher, Howth Head, Giants Causeway, and the Dunluce region, shows that fog banks frequently settle in depressions and cliffside gaps. Visibility may shift dramatically within a few steps. Monastic ruins, such as those at Clonmacnoise or Skellig Michael, exhibit narrow walkways and multi-level stone construction.

#### Stage Mechanic

- A dense fog layer occupies the center of the stage.
- Fog gradually clears toward the outer platforms.
- Movement and jump height remain standard.

#### Gameplay Impact

- Reduced visibility around the token increases close-range engagement.
- Pushback projectiles are harder to track inside the fog.
- Respawning players must re-enter the uncertain mid-zone, increasing positional risk.

#### Design Rationale

Fog behavior is drawn directly from real microclimate observations, while Ireland's symbolic relic—the Book of Kells—subtly influences environmental decoration through illuminated patterns and carved motifs.

## **-Scotland-**

### **Environmental Basis**

Highland tours through Glen Coe, Glenfinnan, and Cairngorms emphasize heavy winds, uneven elevation, and a sense of grounded movement. Tower ruins such as those seen at Edinburgh Castle exhibit thick walls and collapsed stone slabs that suggest weight and resistance.

### **Stage Mechanic**

- Movement speed reduced
- Jump height reduced

### **Gameplay Impact**

- Traversal becomes slower and more intentional.
- Vertical engagement is limited, affecting evasion and platform access.
- Pushback is harder to recover from due to sluggish movement.

### **Design Rationale**

The mechanic reinforces Scotland's identity as the region of atmospheric heaviness, structural weight, and grounded traversal.

## **-Iceland-**

### **Environmental Basis**

Tours at Jökulsárlón, Diamond Beach, and glacier areas reveal sharp glacial fragments, unstable ice shelves, and open volcanic plains with high visibility. These hazard zones require precise movement and careful awareness.

### **Stage Mechanic**

- Ice pockets cause instant elimination.
- Movement and visibility remain normal.

### **Gameplay Impact**

- Traversal requires precision.
- Combat favors spacing and environmental awareness.

### **Design Rationale**

Iceland's real-world ice hazards and volcanic contrasts translate directly into the stage's lethal elements, making it the precision-oriented region.

## **3D EXPANSION DESIGN**

The 3D version expands the regions into a multi-map progression system connected by the Rift, an abstract spatial fracture that isolates and arranges environments. Each region contains a symbolic relic that anchors its identity:

- Ireland: Book of Kells → illumination
- Scotland: Claymore → sovereignty
- Iceland: Runestone → fate

These relics support environmental cohesion, not narrative complexity.

Players may start in any region, but once they leave, they cannot return. Each region holds one relic; securing two of three grants victory.

The three phases follow the structure of the relics and the landscape logic.

## -Ireland (Fog Corridors and Monastic Ruins)-

### **Environmental Influence**

Tours of Ireland reveal multi-layered stone structures, coastal pathways, and strong fog behavior shaped by terrain depressions. Irish monastic sites show complex architecture with stacked levels, small chambers, and carved ornamentation.

### **3D Environmental Design**

- Volumetric fog forms corridors and low-visibility basins.
- Stone ruins create multi-tier traversal paths.
- Light sources produce temporary clarity pockets.
- Cliffside routes connect elevated vantage points to fogged interiors.

### **Mechanics in 3D**

- Exploration emphasizes perception, short-range detection, and learning the map's hidden geometry.
- Fog behaves dynamically based on wind and elevation changes.

### **Relic Integration**

The Book of Kells is placed within a carved shrine or illuminated chamber, using patterns inspired by manuscript art without introducing narrative characters.

## -Scotland (Heavy Terrain and Fortified Structures)-

### **Environmental Influence**

Highland geography includes long glacial valleys, ridge-line winds, and stone fortifications. Tours consistently highlight the physical "weight" of the structures and terrain.

### **3D Environmental Design**

- Long glens create natural funnels.
- Strong wind zones reduce movement and alter jump arcs.
- Tower ruins collapse in ways that shape controlled traversal routes.
- Slope-based elevation affects acceleration and stamina.

### **Mechanics in 3D**

- Movement and jump height vary with terrain conditions.
- Combat favors grounded positioning and forethought over reactive mobility.

### **Relic Integration**

The Claymore is housed in a raised cairn or hall-like ruin, symbolizing stability and authority.

## -Iceland (Hazard Fields and Elemental Instability)-

### **Environmental Influence**

Iceland's tours reveal stark contrasts: black sand plains, ice fragments scattered unpredictably, and geothermal venting. These features create natural hazard fields.

### **3D Environmental Design**

- Ice shards become dynamic 3D hazards with shifting collision volumes.
- Volcanic vents produce steam pockets or heat distortions.
- Ice shelves crack under pressure, altering traversal mid-match.
- Open plains emphasize long sightlines and minimal obstruction.

### **Mechanics in 3D**

- High-risk movement defines the region.
- Pushback is extremely punishing near hazard clusters.
- Environmental instability creates emergent gameplay moments.

### **Relic Integration**

The Runestone appears within fractured basalt or ice-enclosed structures, reflecting the region's theme of fate and volatility.

### **Conclusion**

The 2D prototype establishes three clear mechanical identities; fog (Ireland), slowed movement (Scotland), and lethal hazards (Iceland)—all grounded in real-world environmental research from these landscapes. The 3D design expands each region into a full traversal environment shaped directly by historical sites, geological features, and culturally significant architectural patterns. Relics unify the regions symbolically while the Rift provides structural cohesion. Together, these systems create a scalable, culturally informed foundation for both the current prototype and the planned long-term game vision.