

# Draft IIP-x Parameters for Illuvium: Zero Land Sale

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|----|---|----------|-----------------------------------|----------------|------------|---------|
|    | Parameters for Illuvium: Zero Land Sale | Proposed | Aaron Warwick (aaron@illuvium.io) |                | 2021-11-21 | N/A     |

## Simple Summary

The Illuvium mini game, now officially called [Illuvium: Zero](#), will soon be ready. Leading up to this, we must get approval on the details of the Land Sale. Following this IIP will be the release of two additional guide documents. One describing [Illuvium: Zero](#) in more detail, and one detailing how to buy in the land sale. While these are not specifically required for this IIP, they will give much needed context in an easily digestible way.

## Abstract

A 3D isometric city building game is being developed using Unity and is getting closer to its Alpha release. This requires a land sale to take place which will mint the land players will use to play [Illuvium: Zero](#). This land sale will be hosted in the IlluviDEX and represents our largest web app to date and needs to be configured in a way that is approved by the council.

## Overview

### Land Sale Timings

|                               |            |
|-------------------------------|------------|
| <b>Total Duration of Sale</b> | 3 days     |
| <b>Plots Sold per Batch</b>   | 278 plots  |
| <b>Batch Release Rate</b>     | 1 per hour |
| <b>Duration of Each Batch</b> | 2          |

Practically, this means that every hour approximately 278 new plots will be activated for sale. At this point, they will start reducing in price until someone purchases them. There is nothing needed to do for purchase besides selecting the plot and paying the price on display. If you wish to buy for a lower price, wait for it to drop, but also know that you risk that plot being purchased by another person.

Since batches are released every hour, there may be some overlap, as one batch will be 1 hour old (approximately 30% of the starting price) and the other will be brand new. Each batch will have roughly the same ratio of Tiers as the overall land numbers.

### Land NFT Numbers

|   |        |
|---|--------|
| <b>Total Land NFT plots</b>                       | 100000 |
| <b>Total plots available in first sale</b>        | 20000  |
| <b>Tier 5 Land Plots to be Sold in First Sale</b> | 2      |
| <b>Tier 4 Land Plots to be Sold in First Sale</b> | 869    |
| <b>Tier 3 Land Plots to be Sold in First Sale</b> | 2088   |
| <b>Tier 2 Land Plots to be Sold in First Sale</b> | 5012   |
| <b>Tier 1 Land Plots to be Sold in First Sale</b> | 12029  |

### Land NFT Details

Each plot of land will have limited details available before purchase as outlined below:

|               |  |
|---------------|--|
| <b>Region</b> | There are 7 regions in total. Region affects the probability of Illuvial affinity scanned. |
|---------------|--|

|                 |  |
|-----------------|--|
| <b>Tier</b>     | There are 5 Tiers in total (Tier 0 is not sold). Tier affects the number of element and fuel sites as well as the landmarks available. |
| <b>Location</b> | Location is only relevant for future expansions where adjacent land may be able to be merged.  |

Once purchased, the immutable blockchain contract will mint an NFT containing details of the land plot including a random seed which can be used to deterministically generate the site details and landmark details which comprise the land plot.

The deterministic function which generates these details will be stored in the immutable blockchain contract, and can be used to verify that applications like the [Illuvium: Zero](#) game client or the IlluviDEX web application are honoring the land generation function as defined in the contract.

This function generates the following details:

|                      |  |
|----------------------|--|
| <b>Element Sites</b> | An array of Element Sites containing details of each site's type and location.                         |
| <b>Fuel Sites</b>    | An array of Fuel Sites containing details of each site's type and location.                            |
| <b>Landmark</b>      | The type and position of any generated Landmark. Empty for those Tiers which do not include Landmarks. |

### Number of Sites and Landmarks per Tier

The number of sites and landmarks per tier is fixed, but the type of these sites and landmarks can vary. For example, one Tier 1 site may have one of each Element Site or it may have 3 Lakes.

The following table defines the number of Element Sites, the number of Fuel Sites, and the class of Landmark for each tier:

| Land Tier | # of Element Sites | # of Fuel Sites | Number and class of Landmark |
|-----------|--------------------|-----------------|------------------------------|
| Tier 1    | 3                  | 1               | None. No landmark.           |
| Tier 2    | 6                  | 3               | None. No landmark.           |
| Tier 3    | 9                  | 6               | 1 Element Landmark           |
| Tier 4    | 12                 | 9               | 1 Fuel Landmark              |
| Tier 5    | 15                 | 12              | 1 Arena                      |

Quantities of sites are defined, meaning that all land of a particular tier will have the potential to produce just as much as any other land plot.

There will be minor differences due to:

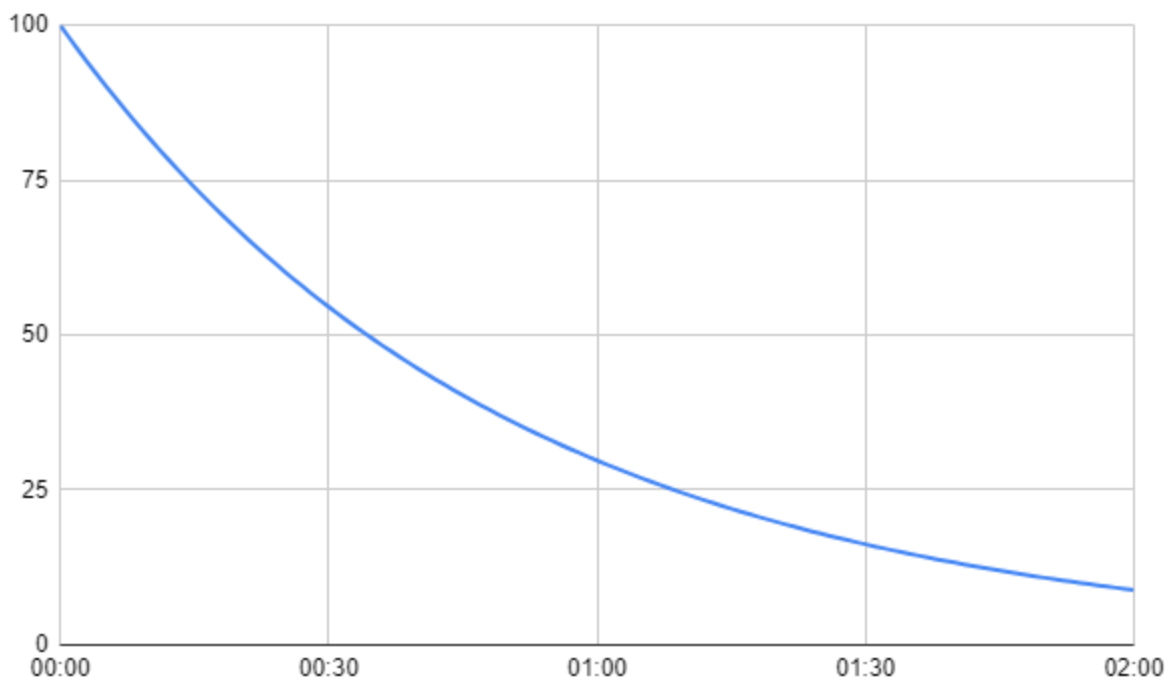
- Variety and spread of sites
- Location of sites on the plot
- Synergy between sites and landmark

We feel the slight randomness adds an element of excitement to the sale.

### Land NFT Pricing

The land sale will use a declining price model which will be configured with a starting value that declines over a two hour period at a rate of 2% per minute\*.

| Tier  | Starting Price in ETH |
|---|-----------------------|
| Starting Price for Tier 5 Land Plot in First Sale | Silent Auction        |
| Starting Price for Tier 4 Land Plot in First Sale | 20                    |
| Starting Price for Tier 3 Land Plot in First Sale | 5                     |
| Starting Price for Tier 2 Land Plot in First Sale | 1.5                   |
| Starting Price for Tier 1 Land Plot in First Sale | 0.5                   |



\*Tier 5 Land will be sold through a silent auction as there are only 2 available.

#### Payments

ETH and sILV can be used as payment methods for land, but not in one transaction. While sILV will not attract external revenue, it will incentivize current token holders to claim their yield tokens as sILV. This phenomenon will massively reduce the total supply of ILV long term.

#### Revenue Distribution

Land owners will have the opportunity to earn revenue from players in the main game through novel use of a Balancer multi token Weighted Pool. They will do so by swapping fuels they generate in game for ETH. On the other side, players in Illuvium will swap ETH\* for fuel, which is used to complete all transactions in the game except for IlluviDEX trading between players.

The target will be for land owners to be able to earn approximately 5% of the total revenue generated from in game purchases in Illuvium. This is achieved by the Illuvium DAO swapping 19 fuel for every 1 fuel swapped by players of [Illuvium: Zero](#).

#### Change To Illuvium Pricing

The goal for [Illuvium: Zero](#) is to make it exciting for land owners to have some agency which includes having an influence on the price of the fuel they swap as well as having an influence on the main game. However, the main game requires some level of stability in order to function well. We have come up with a solution to these requirements:

Fuel (which is required for all in-game interactions) will not fixed to USD. Instead pricing in game will be a fixed amount of fuel. This, however, would cause fuel prices to fluctuate significantly depending on the actions of the land holders. Instead, the DAO will automatically supply or withdraw fuel from the balancer pool if the price differs from the base price by more than 25% in either direction.

Practically, this means if demand for fuel is higher or lower compared to the production, the price of actions in Illuvium can increase or decrease by up to 25%. This gives agency to land holders to sell when the price is high, and also players of the main game to buy fuel when the price is low.

Council can at any time adjust the parameters of either the base price for fuel, or the percentage variance allowed. They can also adjust the approximate percentage of revenue received by land holders.

\*sILV will not be used to swap for fuel. Instead sILV will be used as an alternative to fuel, pegged to the price of ILV.

#### Layer 2 Developments

**i** The details in this section are non binding, but are intended to show the DAO the goals of the team going forward.

We are currently in talks with IMX to find a way to operate the sale on Layer 2. Due to technological limitations, this is currently not likely and may require some centralisation. Due to the relatively high cost of land compared to gas fees, in this case we will bias decentralisation over gas costs. However, if a solution presents itself to operate the sale in a decentralised way on layer 2, we will do this. Please note that this may add some small delay to the sale.

We are also negotiating the prospect of having the Balancer Weighted Pool (and the entire staking architecture) on layer 2. The original plan was to operate entirely on layer 1 for both staking and the balancer pool, with the Illuvium game existing on L2. However, if we are able to migrate before launch we will do so. Operating the entire protocol on L2 is the eventual goal and opens up a large number of opportunities.

Keep in mind that staking on L2 would still have gas costs as it is not minting or swapping. However the cost would be a fraction of Layer 1.

## **Rationale**

By providing all the details of the Land Sale early, we can make sure the community are well informed. All the details above have been thought through carefully, and we feel they are mature enough for the council to consider. Changes to the above are, of course, acceptable. However the community should understand that some changes will result in increased time to market. But as always, we urge the community to focus on getting things done well, rather than just fast.

## **Test Cases**

N/A