

# STAYS AFU **AUDIT**

*September 8TH, 2022*

HONEY

# TABLE OF CONTENTS

- I. SUMMARY
- II. OVERVIEW
- III. FINDINGS
  - A. **CENT-3** | Centralization of initial token distribution
  - B. **EXT-1** | Dependence to external protocol
  - C. **COMP-1** | Unlocked compiler versions
  - D. **GAS-3** | Unoptimized function type
- VI. DISCLAIMER

## AUDIT SUMMARY

This report was written for **CryptoBee (\$Honey)** in order to find flaws and vulnerabilities in the **CryptoBee** project's source code, as well as any contract dependencies that weren't part of an officially recognized library.

A comprehensive examination has been performed, utilizing Static Analysis, Manual Review, and **CryptoBee** Deployment techniques. The auditing process pays special attention to the following considerations:

- ❖ Testing the smart contracts against both common and uncommon attack vectors
- ❖ Assessing the codebase to ensure compliance with current best practices and industry standards
- ❖ Ensuring contract logic meets the specifications and intentions of the client
- ❖ Cross referencing contract structure and implementation against similar smart contracts produced by industry leaders
- ❖ Through line-by-line manual review of the entire codebase by industry expert

# AUDIT OVERVIEW

## PROJECT SUMMARY

Project name	CryptoBee
Description	<p>CryptoBee is a Play To Earn on the BNB chain that offers NFTs in the form of bees, bears and hives. These bees allow you to create honey called "\$HONEY".</p> <p>There are two game modes in CryptoBee, the Farming mode and the Battle mode.</p>
Platform	BNB Chain
Language	Solidity
Codebase	<a href="https://bscscan.com/address/0xbb443C64A3E55F2b0e868B848e5F32D1Fd67FEC7#code">https://bscscan.com/address/0xbb443C64A3E55F2b0e868B848e5F32D1Fd67FEC7#code</a>

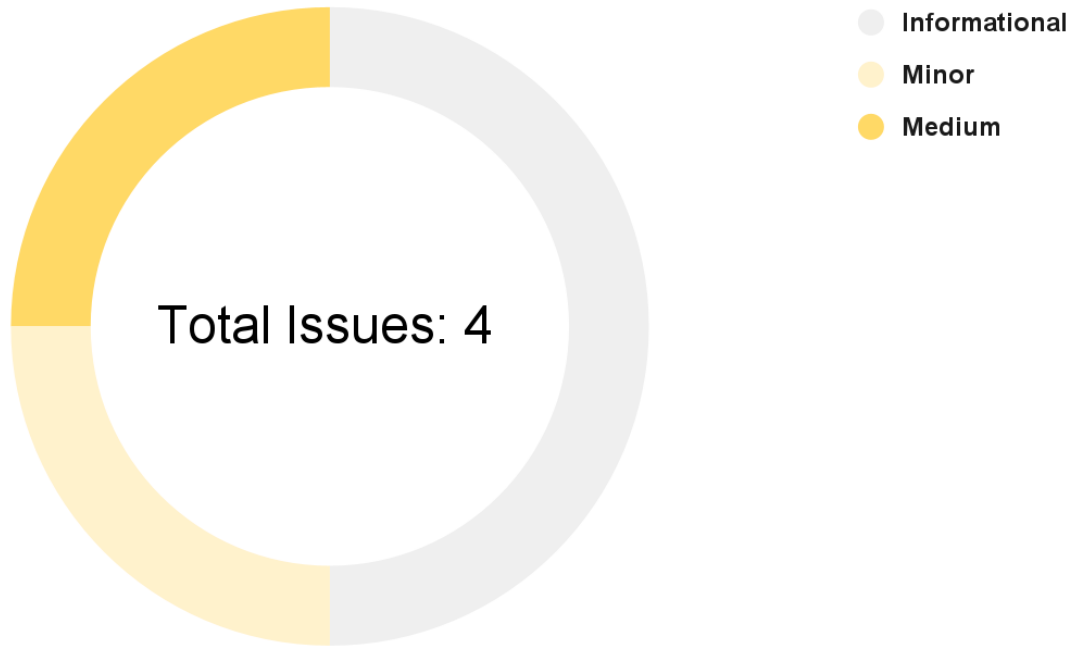
## FINDINGS SUMMARY

Vulnerability	Total
● Critical	0
● Major	0
● Medium	1
● Minor	1
● Informational	2

## EXECUTIVE SUMMARY

There have been no major or critical issues related to the codebase and all findings listed here range from informational to medium. The medium security issues are the: Centralisation of initial token supply.

# AUDIT FINDINGS



Code	Title	Severity
CENT-3	Centralization of initial token distribution	● Medium
EXT-1	Dependence to external protocol	● Minor
COMP-1	Unlocked compiler versions	● Informational
GAS-3	Unoptimized function type	● Informational

## CENT-3 | Centralization of initial token distribution

### Description

A **constructor** (line 19) within the contract mints the initial token supply to the deployer address (`msg.sender`). This initially centralizes token supply to the deployer address.

### Recommendation

We recommend decentralizing tokens as soon as possible, matching the project's intentions. Examples of this are burning tokens or adding tokens to a liquidity pool (locked). We also recommend being fully transparent with the community about token distribution.

## EXT-1 | Dependence to external protocol

### Description

The contract interacts with [PancakeSwap](#) protocols. The scope of the audit would treat these third party entities as black boxes and assume they are fully functional. However in the real world, third parties may be compromised thus leading assets to be lost or stolen. We fully understand that the business logic of the [CryptoBee](#) project is designed to work with [PancakeSwap](#) protocols. This extends to other protocols and interfaces not within the scope of this audit.

### Recommendation

We encourage the team to constantly monitor the security level of the entirety of [PancakeSwap](#) protocols interacted with, as the security of the project is highly dependent on the security of these decentralized exchange platforms.

## COMP-1 | Unlocked compiler version

### Description

CryptoBee's contract does not have locked compiler versions, meaning a range of compiler versions can be used. This can lead to differing bytecodes being produced depending on the compiler version, which can create confusion when debugging, as bugs may be specific to a specific compiler version(s).

### Recommendation

To rectify this, we recommend setting the compiler to a single version, the version tested the most to be compatible with the code, an example of this change can be seen below.

```
pragma solidity 0.8.0;
```

## GAS-3 | Unoptimized function type

### Description

Throughout **CryptoBee's** contracts some functions are of type public although they are never called within the contract. External functions require significantly less gas to call. Such found functions are listed below:

- ❖ **name** -> Line 25
- ❖ **symbol** -> Line 29
- ❖ **decimals** -> Line 33
- ❖ **totalSupply** -> Line 37
- ❖ **balanceOf** -> Line 41
- ❖ **transfer** -> Line 45
- ❖ **approve** -> Line 55
- ❖ **transferFrom** -> Line 61
- ❖ **increaseAllowance** -> Line 72
- ❖ **decreaseAllowance** -> Line 78

### Recommendation

We recommend reviewing each of the functions listed above and where possible switch their type from public to external.

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## StaySAFU security assessment

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This report in no way provides investment advice, nor should be leveraged as investment advice of any sort. This report represents an extensive assessing process intending to help our customers increase the quality of their code while reducing the high level of risk presented by cryptographic tokens and blockchain technology.

Blockchain technology and cryptographic assets present a high level of ongoing risk.

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