

expelee

Building the Futuristic **Blockchain Ecosystem**

Security Audit Report FOR



8BitEarn

OVERVIEW

The Expelee team has performed a line-by-line manual analysis and automated review of the smart contract. The smart contract was analysed mainly for common smart contract vulnerabilities, exploits, and manipulation hacks.

According to the smart contract audit:

 Audit Result	Passed
 KYC Verification	Done
 Audit Date	16 Jan 2023

Audit Passed With Low Risk

-Team Expelee

PROJECT DESCRIPTION

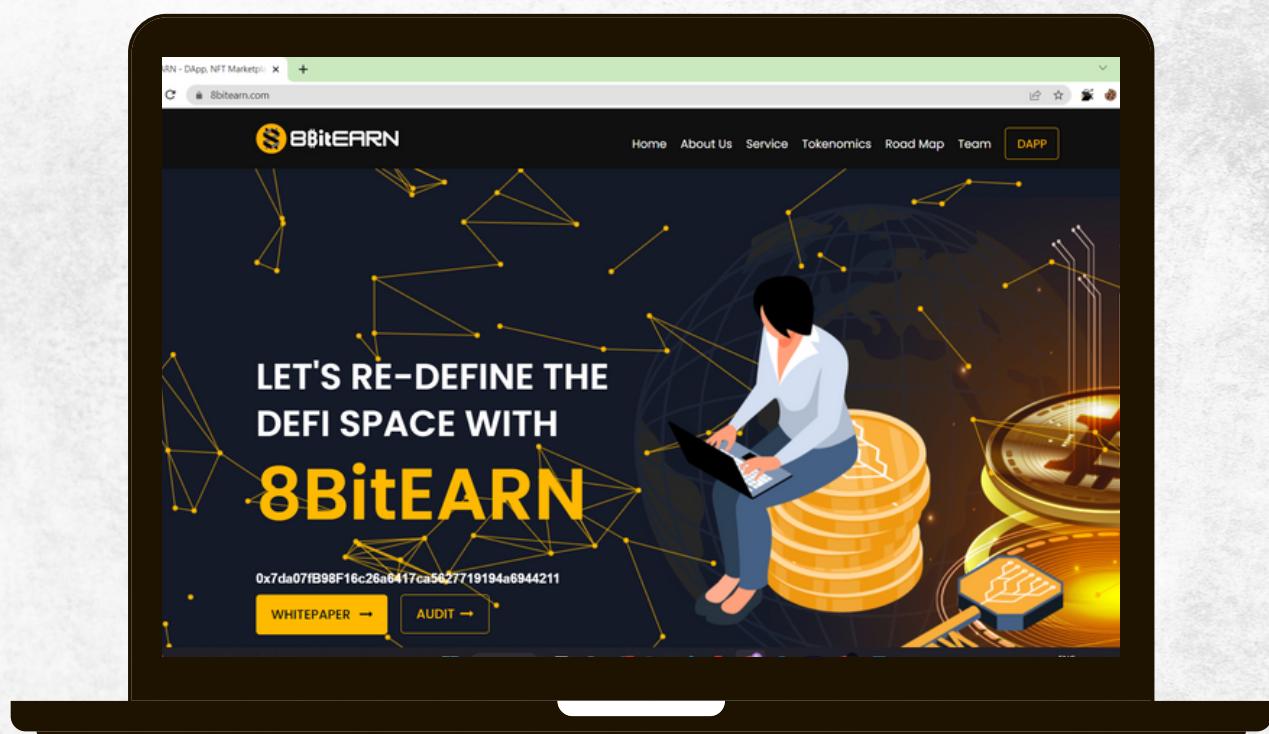
8BitEARN

\$8Bit is a hyper-deflationary BEP-20 native token of the 8BitEARN Ecosystem, that opens numerous passive income streams & benefits to holders by offering BTC Reflection, Staking Rewards, Monthly Diamond Hand Rewards, Quarterly Revenue Distribution, BUSD Credit Facility, Investment Insurance at ProPAD, Farming & Cashback at ProDEX, several DeFi benefits to 8Bit NFT holders with flawless NFT trading at own NFT Marketplace, transparency & integrity through DAO Governance and many more.



Social Media Profiles

8BitEARN



 <https://www.8bitearn.com/>

 <https://t.me/official8BitEARN>

 <https://twitter.com/8BitEARN>

**It's always good to check the social profiles of the project,
before making your investment.**

-Team Expelee

CONTRACT DETAILS

Token Name	Symbol
8BitEARN	8Bit
Network	Language
BSC	Solidity
Contract Address (Verified)	
0x7da07fB98F16c26a6417ca5627719194a6944211	
Token Type	Total Supply
BEP20	100, 000, 000
Compiler	Optimization Enabled
v0.8.17+commit.8df45f5f	Yes with 200 runs
Contract SHA-256 Checksum:	
9406c9f96b401a6f77e77ac728442a8e2ebf7fadef8e4fff14f52c8c56c496da	
Owner's Wallet	
0x1682eb62b8C1c5542860b526E848EB63DF3bDad0	
Deployer's Wallet	
0xbfC141a02AE68124573Fe81765e5d7361A6206b2	

AUDIT METHODOLOGY



Audit Details

Our comprehensive audit report provides a full overview of the audited system's architecture, smart contract codebase, and details on any vulnerabilities found within the system.



Audit Goals

The audit goal is to ensure that the project is built to protect investors and users, preventing potentially catastrophic vulnerabilities after launch, that lead to scams and rugpulls.



Code Quality

Our analysis includes both automatic tests and manual code analysis for the following aspects:

- Exploits
- Back-doors
- Vulnerability
- Accuracy
- Readability



Tools

- DE
- Open Zeppelin
- Code Analyzer
- Solidity Code
- Complier
- Hardhat

FUNCTION OVERVIEW

Can Take Back Ownership	Not Detected
Owner Change Balance	Not Detected
Blacklist	Not Detected
Modify Fees	Not Detected
Proxy	Not Detected
Whitelisted	Not Detected
Anti Whale	Not Detected
Trading Cooldown	Not Detected
Transfer Pausable	Not Detected
Cannot Sell All	Not Detected
Hidden Owner	Not Detected
Mint	Not Detected

VULNERABILITY CHECKLIST

Design Logic	Passed
Compiler warnings.	Passed
Private user data leaks	Passed
Timestamp dependence	Passed
Integer overflow and underflow	Passed
Race conditions & reentrancy. Cross-function race conditions	Passed
Possible delays in data delivery	Passed
Oracle calls	Passed
Front running	Passed
DoS with Revert	Passed
DoS with block gas limit	Passed
Methods execution permissions	Passed
Economy model	Passed
Impact of the exchange rate on the logic	Passed
Malicious Event log	Passed
Scoping and declarations	Passed
Uninitialized storage pointers	Passed
Arithmetic accuracy	Passed
Cross-function race conditions	Passed
Safe Zeppelin module	Passed
Fallback function security	Passed

RISK CLASSIFICATION

When performing smart contract audits, our specialists look for known vulnerabilities as well as logical and access control issues within the code. The exploitation of these issues by malicious actors may cause serious financial damage to projects that failed to get an audit in time. We categorize these vulnerabilities by the following levels:

High Risk

Issues on this level are critical to the smart contract's performance/functionality and should be fixed before moving to a live environment.

Medium Risk

Issues on this level are critical to the smart contract's performance/functionality and should be fixed before moving to a live environment.

Low Risk

Issues on this level are minor details and warning that can remain unfixed.

Informational

Information level is to offer suggestions for improvement of efficacy or security for features with a risk free factor.

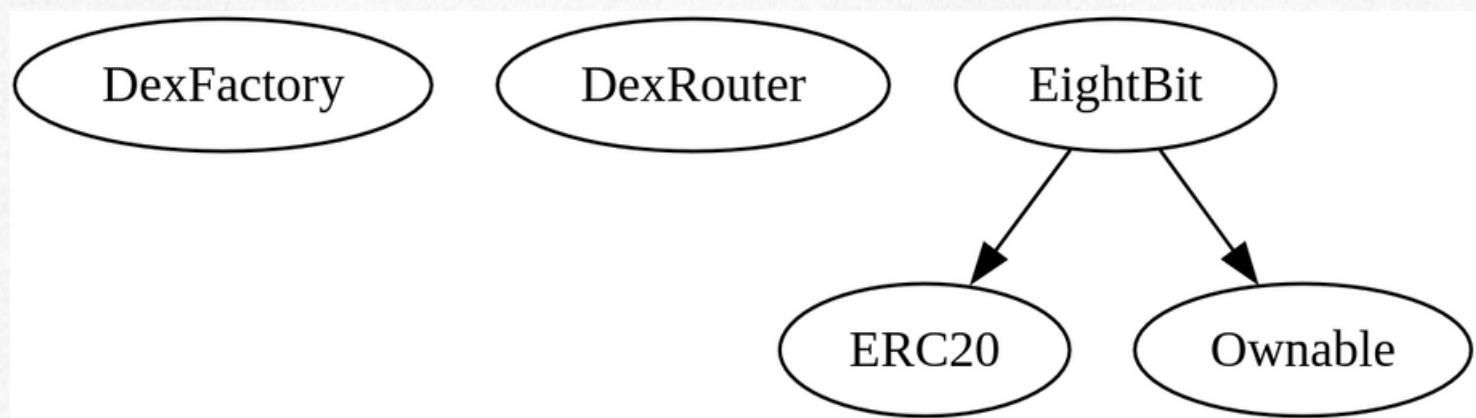
AUDIT SUMMARY

Used Tools:

Manual Review - Forked Pancakeswap V2 on Local Blockchain Tests:

- Deployment
 - Adding Liquidity
 - Buying and selling for everyone, right after adding liquidity
 - Specific tax for each Dex
 - Auto liquidity
 - BTC rewards
-

Inheritance Trees:



Summary:

- Owner is not able to change or set taxes more than 10%
- Owner is able to set different tax for different dexes
- Owner is able to set a max wallet amount, but not less than 0.5% of total supply
- Owner is not able to pause trades
- Owner is not able to mint new tokens
- Owner is not able to blacklist an arbitrary address

Functions:

Symbol	Meaning
--------	---------

-----|-----|

 | Function can modify state |

 | Function is payable |

L	addPair	External !		onlyOwner	
L	removePair	External !		onlyOwner	
L	setDefaultPair	External !		onlyOwner	
L	setPairSellTax	External !		onlyOwner	
L	setPairBuyTaxes	External !		onlyOwner	
L	setTransferTaxes	External !		onlyOwner	
L	setTaxShares	External !		onlyOwner	
L	setMarketingWallet	External !		onlyOwner	
L	setDevelopmentWallet	External !		onlyOwner	
L	setBuyBackWallet	External !		onlyOwner	
L	setMaxWallet	External !		onlyOwner	
L	toggleSwapping	External !		onlyOwner	
L	setWhitelistedStatus	External !		onlyOwner	
L	excludeFromSellTaxes	External !		onlyOwner	
L	excludeFromBuyTaxes	External !		onlyOwner	
L	excludeFromTransferTaxes	External !		onlyOwner	
L	excludeFromMaxWallet	External !		onlyOwner	
L	setExcludedFromDividend	External !		onlyOwner	
L	setAntiDumpStatus	External !		onlyOwner	
L	setAntiDumpLimit	External !		onlyOwner	
L	setAntiDumpCooldown	External !		onlyOwner	
L	getRemainingToAutoClaim	External !	NO !		
L	claimRewards	Public !		NO !	
L	getPendingRewards	External !	NO !		
L	getClaimedRewards	External !	NO !		
L	enableTrading	External !		onlyOwner	

		_takeTax Internal					
		_transfer Internal					
		manageTaxes Internal					
		swapAndLiquify Internal					
		addLiquidity Private					
		swapToETH Internal					
		withdrawStuckETH External	!				onlyOwner
		withdrawStuckTokens External	!				onlyOwner
		burn External	!				onlyOwner
		<Receive Ether> External	!				NO !

Features

Different tax for different Dexes:

8bit token is going to be launched on Both pcs and prodex, there will be different taxes on each dex

Anti-Dump Feature:

when is on, there will be a max amount of tokens that can be sold (floor at 250, 000 tokens) in a time period (always less than 24hours)

Rewards:

8bit token supports BTC reflections, a portion of taxes are converted to BNB, sent to dividend tracker and convert to BTC for rewards, rewards are handled by cashier contract.

Burnable:

8bit is a burnable token, meaning owner is able to reduce supply (using burn wallet)

MANUAL AUDIT

Severity Criteria

Expelee assesses the severity of disclosed vulnerabilities according to a methodology based on OWASP standards.

Vulnerabilities are divided into three primary risk categories: **high**, **medium**, and **low**.

High-level considerations for vulnerabilities span the following key areas when conducting assessments:

- Malicious Input Handling
- Escalation of privileges
- Arithmetic
- Gas use

Overall Risk Severity				
Impact	HIGH	Medium	High	Critical
	MEDIUM	Low	Medium	High
	LOW	Note	Low	Medium
		LOW	MEDIUM	HIGH
Likelihood				

FINDINGS

- **High Risk Findings:** 0
 - **Medium Risk Findings:** 0
 - **Low Risk Findings:** 3
 - **Suggestions & discussion:** 0
 - **Gas Optimizations :** 0
-

Low Risk Findings:

Centralization – owner is able to set up to 10% buy and 10% sell tax using `setPairBuyTax` and `setPairSellTax` functions.

Centralization – anti-dump - owner is able to set a max amount for selling in a time frame (time frame can not be more than 24hours, max amount of sell can not be less than 0.5% of total supply)

```
function setAntiDumpLimit(uint256 newLimit) external onlyOwner{
    require(newLimit >= 250000 * 1e18, "cannot set limit less than
250, 000 tokes");
    antiDumpLimit = newLimit;
}
```

Centralization – owner is able to set a max wallet but not less than 0.5% of total supply.

```
function setMaxWallet(uint256 tokensCount) external onlyOwner {
    require(tokensCount * 1000 / totalSupply() >= 5, "can not set
max wallet less than 0.5 of total supply");
    maxWallet = tokensCount;
}
```

ABOUT EXPELEE

Expelee is a product-based aspirational Web3 Start-up. Coping up with numerous solutions for blockchain Security and constructing a Web3 Ecosystem from Deal making platform to developer hosting open platform, while also developing our own commercial and sustainable blockchain.



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