

# RugFreeCoins Audit



Viking Floki Audit
Smart Contract Security Audit
November 14, 2021

### Contents

Audit details	1
Disclaimer	2
Background	3
About the project	4
Target market and the concept	6
Potential to grow with score points	7
Total Points	7
Contract details	8
Contract code function details	Ş
Contract description table	10
Security issue checking status	28
Owner privileges	29
Audit conclusion	33

### **Audit details**



### **Audited project**

Viking Floki Token



#### **Contract Address**

0x42FcD264D6C61bAe8BBf52CCa0776dD914E497E9



#### **Client contact**

Viking Floki Team



#### **Blockchain**

Binance smart chain



#### **Project website**

https://vikingfloki.org/

### **Disclaimer**

This is a limited report on our findings based on our analysis, in accordance with good industry practice as at the date of this report, in relation to cybersecurity vulnerabilities and issues in the framework and algorithms based on smart contracts, the details of which are set out in this report. In order to get a full view of our analysis, it is crucial for you to read the full report. While we have done our best in conducting our analysis and producing this report, it is important to note that you should not rely on this report and cannot claim against us on the basis of what it says or doesn't say, or how we produced it, and it is important for you to conduct your own independent investigations before making any decisions. We go into more detail on this in the disclaimer below – please make sure to read it in full.

DISCLAIMER: By reading this report or any part of it, you agree to the terms of this disclaimer. If you do not agree to the terms, then please immediately cease reading this report, and delete and destroy any and all copies of this report downloaded and/or printed by you. This report is provided for information purposes only and on a non-reliance basis and does not constitute investment advice. No one shall have any right to rely on the report or its contents, and Rugfreecoins and its affiliates (including holding companies, shareholders, subsidiaries, employees, directors, officers and other representatives) (Rugfreecoins) owe no duty of care towards you or any other person, nor does Rugfreecoins make any warranty or representation to any person on the accuracy or completeness of the report. The report is provided "as is", without any conditions, warranties or other terms of any kind except as set out in this disclaimer. and Rugfreecoins hereby excludes all representations, warranties, conditions and other terms (including, without limitation, the warranties implied by law of satisfactory quality, fitness for purpose and the use of reasonable care and skill) which, but for this clause, might have effect in relation to the report. Except and only to the extent that it is prohibited by law, Rugfreecoins hereby excludes all liability and responsibility, and neither you nor any other person shall have any claim against Rugfreecoins, for any amount or kind of loss or damage that may result to you or any other person (including without limitation, any direct, indirect, special, punitive, consequential or pure economic loss or damages, or any loss of income, profits, goodwill, data, contracts, use of money, or business interruption, and whether in delict, tort (including without limitation negligence), contract, breach of statutory duty, misrepresentation (whether innocent or negligent) or otherwise under any claim of any nature whatsoever in any jurisdiction) in any way arising from or connected with this report and the use, inability to use or the results of use of this report, and any reliance on this report. The analysis of the security is purely based on the smart contracts alone. No applications or operations were reviewed for security. No product code has been reviewed.

## **Background**

Rugfreecoins was commissioned by Viking Floki to perform an audit of the smart contract.

#### https://bscscan.com/token/0x42FcD264D6C61bAe8BBf52CCa0776dD914E497E9

The focus of this audit is to verify that the smart contract is secure, resilient and working according to the specifications.

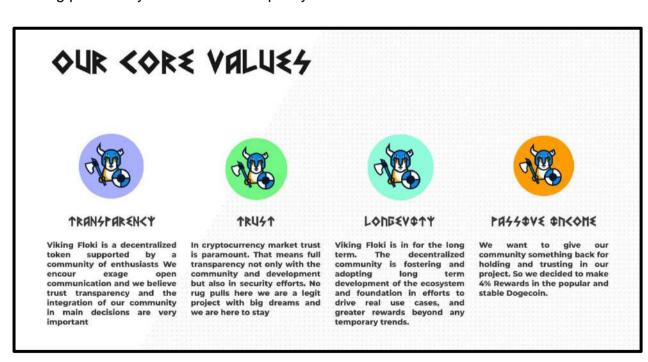
The information in this report should be used to understand the risk exposure of the smart contract, project feasibility, long term sustainability and as a guide to improve the security posture of the smart contract by remediating the issues that were identified.

## **About the project**

Viking Floki is a token built on the Binance Smart Chain. Every hour, Doge rewards are distributed automatically to all holders. Each transaction, purchase and sale incur 12% fee.

#### **Features**

- ❖ The Doge rewards will be distributed among every holder proportional to how many tokens each individual holds in values of 4% when buying and selling.
- ❖ The sustainability fee of 6% for marketing and manual buyback when buying and selling is what allows Viking Floki to hold the aforementioned promise. Tokens will be swapped into Doge and will be sent to a marketing wallet per transaction. This way, Viking Floki will have enough funds to promote the coin and spend for future development without selling tokens as the traditional way.
- ❖ The additional component included under the sustainability section is a liquidity fee of 2% from buying and selling, which is a redistribution mechanism that ensures the trading pool always has sufficient liquidity.

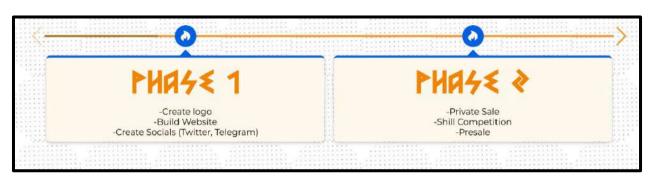


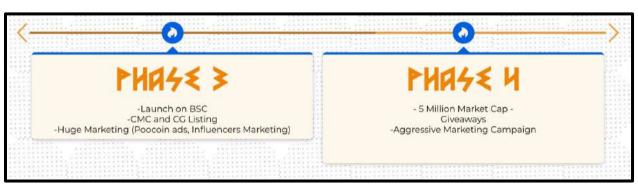
#### **Tokenomics**

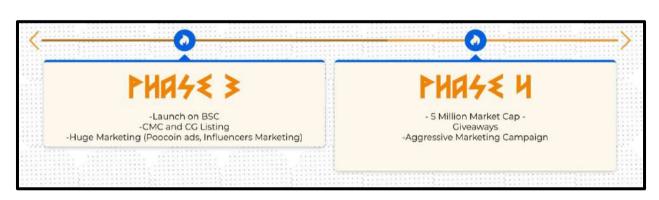
#### 12% fee when buying and selling

- ❖ 4% of trade goes to holders' pockets in Doge tokens.
- 6% of trade goes to the marketing and manual buyback wallet.
- 2% of trade goes to the liquidity pool.

### Roadmap







## Target market and the concept

#### **Target market**

- ❖ Anyone who's interested in Crypto space with long term investment plans.
- ❖ Anyone who's ready to earn a passive income in Doge by holding tokens.
- Anyone who's interested in trading tokens.
- All Doge investors and fans out there.
- ❖ Anyone who's interested in taking part with the future plans of the Viking Floki token.
- Anyone who's interested in making financial transactions with any other party using Doge or Viking Floki as the currency.

#### **Core concept**

#### The Viking Floki reward system

4% of each transaction when buying and selling gets converted to Doge, and is split amongst all holders. Holders will be eligible to receive tokens every hour hours and rewards are proportional to how many tokens each individual holds.

#### Sustainable mechanism

The **sustainability fee of 3% for marketing** is what allows Viking Floki to promote the token and use funds to further development of the platform. Tokens will be swapped into Doge and will be sent to a marketing wallet per transaction. This way, Viking Floki will have access to the funds without selling tokens as the traditional way, which will enable them to consume funds without hurting the project.

The controlled buyback collects 3% tax on each transaction, which is stored inside a private wallet. It is to save from massive dips in order to keep the token market price stable.

The liquidity fee of 2%, which is a redistribution mechanism that ensures the trading pool always has sufficient liquidity.

# Potential to grow with score points

1.	Project efficiency	7/10
2.	Project uniqueness	7/10
3	Information quality	7/10
4	Service quality	7/10
5	System quality	7/10
6	Impact on the community	8/10
7	Impact on the business	8/10
8 Preparing for the future		5/10
Total	7/10	

### **Contract details**

### Token contract details for 14th November 2021

Contract name	Viking Floki
Contract address	0x42FcD264D6C61bAe8BBf52CCa0776dD914E497E9
Token supply	100,000,000
Token ticker	VF
Decimals	18
Token holders	2
Transaction count	2
Marketing address	0x3a7c1348668a76a1c2b3bfe7c6ea51b0fa567fcd
Dividend tracker	0x0310bfa7fc17cf66cb9a7af8d1827aba8218cb1a
Reward Token	0xba2ae424d960c26247dd6c32edc70b295c744c43
Contract deployer address	0x553ab66e11698756665711484909709c3be20f90
Contract's current owner address	0x069fD156c0d22E5D5F68e92f3237624B8eB6Ae9C

## **Contract code function details**

No	Category	Item	Result
		BRC20 Token standards	pass
		compile errors	pass
		Compiler version security	pass
		visibility specifiers	pass
		Gas consumption	pass
1	Coding conventions	SafeMath features	pass
		Fallback usage	pass
		tx.origin usage	pass
		deprecated items	pass
		Redundant code	pass
		Overriding variables	pass
		Authorization of function call	pass
2	Function call audit	Low level function (call/delegate call) security	pass
		Returned value security	pass
		Selfdestruct function security	pass
		Access control of owners	low issue
3	Business security	Business logics	pass
		Business implementations	pass
4	Integer overflow/underflow		pass
5	Reentrancy		pass
6	Exceptional reachable state		pass
7	Transaction ordering dependence		pass
8	Block properties dependence		pass
9	Pseudo random number generator (PRNG)		pass
10	DoS (Denial of Service)		pass
11	Token vesting implementation		pass
12	Fake deposit		pass
13	Event security		pass

## **Contract description table**

Below table represents the summary of the contracts and methods in the token contract. We scanned the whole contract and listed down all the Interfaces, functions and implementations with its visibility and mutability.

Contract	Туре	Bases		
L	Function Name	Visibility	Mutability	Modifiers
Context	Implementation			
L	_msgSender	Internal 🖺		
L	_msgData	Internal 🖺		
IERC20	Interface			
L	totalSupply	External 🌡		NO
L	balanceOf	External 🌡		NO
L	transfer	External 🌡		NO
L	allowance	External 🌡		NO
L	approve	External [		NO
L	transferFrom	External [		NO
SafeMath	Library			
L	tryAdd	Internal 🖺		

L	trySub	Internal 🖺	
L	tryMul	Internal 🖺	
L	tryDiv	Internal 🖺	
L	tryMod	Internal 🖺	
L	add	Internal 🖺	
L	sub	Internal 🖺	
L	mul	Internal 🖺	
L	div	Internal 🖺	
L	mod	Internal 🖺	
L	sub	Internal 🖺	
L	div	Internal 🖺	
L	mod	Internal 🖺	
ERC20	Implementation	Context, IERC20	
L		Public 🎚	NO[
L	name	Public [	NO[
L	symbol	Public [	NO
L	decimals	Public [	NO[

L	totalSupply	Public [	NO
L	balanceOf	Public [	МОЇ
L	transfer	Public [	МО[
L	allowance	Public [	МОЇ
L	approve	Public [	МОЇ
L	transferFrom	Public [	МОЇ
L	increaseAllowance	Public [	МОЇ
L	decreaseAllowanc e	Public [	МОЇ
L	_transfer	Internal 🖺	
L	_mint	Internal 🖺	
L	_burn	Internal 🖺	
L	_approve	Internal 🖺	
L	_setupDecimals	Internal 🖺	
L	_beforeTokenTran sfer	Internal 🖺	
AddressUpgradeable	Library		
L	isContract	Internal 🖺	
L	sendValue	Internal 🖺	

L	functionCall	Internal 🖺	
L	functionCall	Internal 🖺	
L	functionCallWithV alue	Internal 🖺	
L	functionCallWithV alue	Internal 🖺	
L	functionStaticCall	Internal 🖺	
L	functionStaticCall	Internal 🖺	
L	_verifyCallResult	Private 🖺	
Initializable	Implementation		
L	_isConstructor	Private 🖺	
ContextUpgradeable	Implementation	Initializable	
L	Context_init	Internal 🖺	initializer
L	Context_init_un chained	Internal 🖺	initializer
L	_msgSender	Internal 🖺	
L	_msgData	Internal 🖺	
IERC20Upgradeable	Interface		
L	totalSupply	External [	NO

L	balanceOf	External [	NO[
L	transfer	External [	NO[
L	allowance	External [	NO[
L	approve	External [	NO[
L	transferFrom	External [	NO[
SafeMathUpgradeable	Library		
L	tryAdd	Internal 🖺	
L	trySub	Internal 🖺	
L	tryMul	Internal 🖺	
L	tryDiv	Internal 🖺	
L	tryMod	Internal 🖺	
L	add	Internal 🖺	
L	sub	Internal 🖺	
L	mul	Internal 🖺	
L	div	Internal 🖺	
L	mod	Internal 🖺	
L	sub	Internal 🖺	

L	div	Internal 🖺	
L	mod	Internal 🖺	
ERC20Upgradeable	Implementation	Initializable, ContextUpgradeab Ie, IERC20Upgradeabl e	
L	ERC20_init	Internal 🖺	initializer
L	ERC20_init_unc hained	Internal 🖺	initializer
L	name	Public [	NO[
L	symbol	Public [	NO[
L	decimals	Public [	NO
L	totalSupply	Public [	NO[
L	balanceOf	Public [	NO[
L	transfer	Public [	NO[
L	allowance	Public [	NO
L	approve	Public [	NO[
L	transferFrom	Public [	NO[
L	increaseAllowance	Public [	NO[
L	decreaseAllowanc e	Public [	NO

L	_transfer	Internal 🖺	
L	_mint	Internal 🖺	
L	_burn	Internal 🖺	
L	_approve	Internal 🖺	
L	_setupDecimals	Internal 🖺	
L	_beforeTokenTran sfer	Internal 🖺	
Ownable	Implementation	Context	
L		Public [	NO
L	owner	Public [	NO
L	renounceOwnershi p	Public [	onlyOwn er
L	transferOwnership	Public [	onlyOwn er
OwnableUpgradeable	Implementation	Initializable, ContextUpgradeab le	
L	Ownable_init	Internal 🖺	initializer
L	Ownable_init_u nchained	Internal 🖺	initializer
L	owner	Public [	NO
L	renounceOwnershi p	Public [	onlyOwn er

L	transferOwnership	Public [	onlyOwn er
Clones	Library		
L	clone	Internal 🖺	
L	cloneDeterministic	Internal 🖺	
L	predictDeterministi cAddress	Internal 🖺	
L	predictDeterministi cAddress	Internal 🖺	
IUniswapV2Factory	Interface		
L	feeTo	External [	NO
L	feeToSetter	External [	NO
L	getPair	External [	NO
L	allPairs	External [	NO
L	allPairsLength	External [	NO
L	createPair	External [	NO
L	setFeeTo	External [	NO
L	setFeeToSetter	External [	NO
IUniswapV2Router01	Interface		

L	factory	External [		NO
L	WETH	External [		NO
L	addLiquidity	External [		NO
L	addLiquidityETH	External [	<b>d</b> D	NO[
L	removeLiquidity	External 🌡		NO
L	removeLiquidityET H	External [		NO[
L	removeLiquidityWi thPermit	External [		NO[
L	removeLiquidityET HWithPermit	External [		NO
L	swapExactTokens ForTokens	External 🌡		NO
L	swapTokensForEx actTokens	External [		NO
L	swapExactETHFor Tokens	External 🌡	<u>g</u> p	NO
L	swapTokensForEx actETH	External 🌡		NO[
L	swapExactTokens ForETH	External [		NO[
L	swapETHForExact Tokens	External [	ŒD	NO[
L	quote	External [		NO[
L	getAmountOut	External [		NO
L	getAmountIn	External [		NO[
L	getAmountsOut	External 🏿		NO[

L	getAmountsIn	External 🏿		NO[
IUniswapV2Router02	Interface	IUniswapV2Router 01		
L	removeLiquidityET HSupportingFeeO nTransferTokens	External 🌡		NO
L	removeLiquidityET HWithPermitSupp ortingFeeOnTransf erTokens	External [		NOÏ
L	swapExactTokens ForTokensSupport ingFeeOnTransfer Tokens	External [		NOÏ
L	swapExactETHFor TokensSupporting FeeOnTransferTo kens	External [	<u>dib</u>	NOÏ
L	swapExactTokens ForETHSupporting FeeOnTransferTo kens	External 🌡		NOÏ
IUniswapV2Pair	Interface			
L	name	External [		NO]
L	symbol	External 🌡		NO[
L	decimals	External 🌡		NO
L	totalSupply	External 🌡		NO]
L	balanceOf	External 🌡		NO]

L	allowance	External [	ио[
L	approve	External [	NOÎ
L	transfer	External [	NOÎ
L	transferFrom	External [	NOÎ
L	DOMAIN_SEPAR ATOR	External [	NO
L	PERMIT_TYPEHA SH	External [	NO[
L	nonces	External [	NO[
L	permit	External [	NOÎ
L	MINIMUM_LIQUID ITY	External [	NO[
L	factory	External [	NO[
L	token0	External [	NO[
L	token1	External [	NO[
L	getReserves	External [	МОД
L	price0CumulativeL ast	External [	МО[
L	price1CumulativeL ast	External [	NO[
L	kLast	External [	NO[
L	mint	External [	NO[
L	burn	External [	NO

L	swap	External [	NO[
L	skim	External [	NO[
L	sync	External [	NO[
L	initialize	External [	NO[
SafeMathInt	Library		
L	mul	Internal 🖺	
L	div	Internal 🖺	
L	sub	Internal 🖺	
L	add	Internal 🖺	
L	abs	Internal 🖺	
L	toUint256Safe	Internal 🖺	
SafeMathUint	Library		
L	toInt256Safe	Internal 🖺	
		-	
IterableMapping	Library		
L	get	Public [	NO
L	getIndexOfKey	Public [	NO

L	getKeyAtIndex	Public [	NO[
L	size	Public [	NO[
L	set	Public [	NO[
L	remove	Public [	NO[
IBabyToken	Interface		
L	initialize	External [	NO[
DividendPayingToken Interface	Interface		
L	dividendOf	External [	NO[
L	withdrawDividend	External [	NO[
DividendPayingToken OptionalInterface	Interface		
L	withdrawableDivid endOf	External 🎚	NOÏ
L	withdrawnDividend Of	External 🎚	NO[
L	accumulativeDivid endOf	External 🎚	NO[
DividendPayingToken	Implementation	ERC20Upgradeabl e, OwnableUpgradea ble, DividendPayingTo kenInterface,	

		DividendPayingTo kenOptionalInterfa ce		
L	DividendPaying Token_init	Internal 🖺		initializer
L	distributeCAKEDiv idends	Public [		onlyOwn er
L	withdrawDividend	Public [		NO
L	_withdrawDividend OfUser	Internal 🖺		
L	dividendOf	Public [		NO
L	withdrawableDivid endOf	Public [		NO
L	withdrawnDividend Of	Public [		NO
L	accumulativeDivid endOf	Public [		NO
L	_transfer	Internal 🖺		
L	_mint	Internal 🖺		
L	_burn	Internal 🖺		
L	_setBalance	Internal 🖺		
	1		T	T
BABYTOKEN	Implementation	ERC20Upgradeabl e, OwnableUpgradea ble, IBabyToken		
L		Public [		NOÏ

L	initialize	External [		initializer
L		External [	<u>da</u>	NOÏ
L	setSwapTokensAt Amount	External [		onlyOwn er
L	updateDividendTr acker	Public 🎚		onlyOwn er
L	updateUniswapV2 Router	Public 🎚		onlyOwn er
L	excludeFromFees	Public [		onlyOwn er
L	excludeMultipleAc countsFromFees	Public [		onlyOwn er
L	setMarketingWalle t	External [		onlyOwn er
L	setTokenRewards Fee	External [		onlyOwn er
L	setLiquiditFee	External [		onlyOwn er
L	setMarketingFee	External [		onlyOwn er
L	setAutomatedMark etMakerPair	Public [		onlyOwn er
L	blacklistAddress	External [		onlyOwn er
L	_setAutomatedMa rketMakerPair	Private 🖺		
L	updateGasForPro cessing	Public [		onlyOwn er
L	updateClaimWait	External [		onlyOwn er
L	getClaimWait	External [		ио[
L	getTotalDividends Distributed	External [		МО[

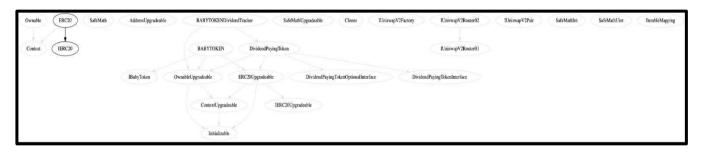
L	isExcludedFromFe es	Public [	NO
L	withdrawableDivid endOf	Public [	NO
L	dividendTokenBal anceOf	Public [	NO]
L	excludeFromDivid ends	External [	onlyOwn er
L	getAccountDividen dsInfo	External [	NO
L	getAccountDividen dsInfoAtIndex	External [	NO
Ļ	processDividendTr acker	External [	NO
L	claim	External [	NO
L	getLastProcessedI ndex	External [	NO]
L	getNumberOfDivid endTokenHolders	External [	NO]
L	_transfer	Internal 🖺	
L	swapAndSendToF ee	Private 🖺	
L	swapAndLiquify	Private 🖺	
L	swapTokensForEt h	Private 🖺	
L	swapTokensForCa ke	Private 🖺	
L	addLiquidity	Private 🖺	
L	swapAndSendDivi dends	Private 🖺	
	•		,

BABYTOKENDividend Tracker	Implementation	OwnableUpgradea ble, DividendPayingTo ken	
L	initialize	External [	initializer
L	_transfer	Internal 🖺	
L	withdrawDividend	Public [	NO
L	excludeFromDivid ends	External [	onlyOwn er
L	updateClaimWait	External [	onlyOwn er
L	getLastProcessedl ndex	External [	NO
L	getNumberOfToke nHolders	External [	NO
L	getAccount	Public [	NO
L	getAccountAtIndex	Public [	NO
L	canAutoClaim	Private 🖺	
L	setBalance	External [	onlyOwn er
L	process	Public [	NO
L	processAccount	Public [	onlyOwn er

#### Legend

Symbol	Meaning
	Function can modify state
ØÞ.	Function is payable

### **Inheritance Hierarchy**



## Security issue checking status

#### High severity issues

No medium severity issues found.

#### Medium severity issues

No medium severity issues found.

#### **❖** Low severity issues

The addLiquidity function calls the uniswapV2Router.addLiquidityETH function with the address specified as owner() for acquiring the generated LP tokens from the Viking Floki (VF)-BNB pool. As a result, over time the \_owner address will accumulate a significant portion of LP tokens. If the \_owner is an EOA(Externally Owned Account), mishandling of its private key can have devastating consequences to the project as a whole.

#### Recommendation

We advise the address of the uniswapV2Router.addLiquidityETH function call to be replaced by the contract itself.

## Owner privileges

The owner can change token swap point.

```
ftrace|funcSig
function setSwapTokensAtAmount(uint256 amount1) external onlyOwner {
    swapTokensAtAmount = amount1;
}
```

The owner can Update dividend tracker.

The owner can update router address.

The owner can exclude wallets from fee.

The owner can change marketing wallet address.

The owner can change all fees.

```
ftrace|funcSig
function setTokenRewardsFee(uint256 value1) external onlyOwner {
    tokenRewardsFee = value1;
    totalFees = tokenRewardsFee.add(liquidityFee).add(marketingFee);
}

ftrace|funcSig
function setLiquiditFee(uint256 value1) external onlyOwner {
    liquidityFee = value1;
    totalFees = tokenRewardsFee.add(liquidityFee).add(marketingFee);
}

ftrace|funcSig
function setMarketingFee(uint256 value1) external onlyOwner {
    marketingFee = value1;
    totalFees = tokenRewardsFee.add(liquidityFee).add(marketingFee);
}
```

The owner can change pair address.

The owner can blacklist wallets.

```
ftrace|funcSig
function blacklistAddress(address account f, bool value f) external onlyOwner {
    _isBlacklisted[account f] = value f;
}
```

❖ The owner can update Gas fee when sending dividends.

The owner can exclude wallets from dividend.

## **Audit conclusion**

While conducting the audit of the Viking Floki smart contract, it was observed that there is nothing alarming with the code, and it only contains low severity issues.