

RugFreeCoins Audit



NEKO ANGEL Token Audit
Smart Contract Security Audit
August 06, 2021

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Audit details



Audited project NEKO ANGEL Token



Contract Address

0x37eBB7138122DF4954d14144b3a8E75279D89E3B



Client contact

NEKO ANGEL Team



Blockchain

Binance smart chain



Project website

https://nekoangel.finance/

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.

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Background

Rugfreecoins was commissioned by NEKO ANGEL to perform an audit of the smart contract.

https://bscscan.com/token/0x37eBB7138122DF4954d14144b3a8E75279D89E3B

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

NEKO ANGEL Token is a token built on the Binance Smart Chain and it is a community-based project. The NEKO ANGEL team devotes time and hard work to create a lovely atmosphere for every member. Each transaction incurs a 15% fee when buying and selling.

Features:

- ❖ The automatic BNB reward of 10% will be distributed among every holder proportional to how many tokens each individual holds.
- ❖ The liquidity fee of 3%, which is a redistribution mechanism that ensures the trading pool always has sufficient liquidity. This is a key element for decentralized exchanges like Pancakeswap.
- ❖ The fee of 2% will be sent to a private wallet, which will be allocated to buyback tokens and charity. Buyback is used to save from massive dips in order to keep the token market price stable.

Tokenomics

15% tax fee when buying and selling

- 10% of every trade goes to holders pockets in BNB.
- 3% of every trade goes to the liquidity pool.
- 2% of every trade goes to buyback tokens and charity.

Roadmap

	JULY, 2021
/	Roadmap Completed
~	Gitbook
~	Token Launch
/	Fairlaunch
	AUGUST, 2021
/	Audit
	List on CoinGecko
	List on CoinMarketCap
	Community Marketing Campaign
	NFTs Cat Box
	Partnership Announce
	Hire Influencer for promoting
	September, 2021
	Cats Breeding
	Cat's Farm
	Charity Donation for Stray Cats
	List on Exchange
	Certik Audit

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 BNB by holding tokens.
- Anyone who's interested in trading tokens.
- ❖ Anyone who's interested in taking part with upcoming NEKO ANGEL NFTs.
- Anyone who's interested in making financial transactions with any other party using NEKO ANGEL as the currency.

Core concept

The BNB reward system

10% of each transaction gets converted to BNBs, and is split amongst all holders. The rewards are sent to holders that have at least 10,000 NEKO ANGEL tokens, holders will be eligible to receive tokens and rewards are proportional to how many tokens each individual holds.

Sustainable mechanism

The liquidity fee of 3%, which is a redistribution mechanism that ensures the trading pool always has sufficient liquidity.

Good cause and keeping the market stable

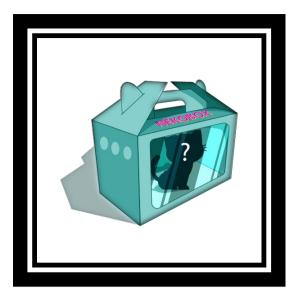
The **fee of 2%** tax on each transaction, which is stored inside a private wallet for buyback tokens or charity. The funds will be kept in the private wallet and will be used for charity or buyback as per the community preference.

Buyback is to save from massive dips in order to keep the token market price stable.

Anti-whale strategy

The NEKO ANGEL contract includes a function that stops all sales above 0.1% of the total supply. This will discourage (mini)-whales from dumping all their bags at once.

The upcoming features



To participate in NFTs;

- ❖ The \$NekoAngel will be required in buying our Neko mystery box!,
- ❖ At this moment, there are 3 cutest little Cat models in Neko Mystery Box.
- ❖ Holders will be getting 1 random Cat per 1 Neko Mystery Box.
- ❖ The most important part!, after getting a Cat(s), users are free to raise Cat(s) with love, breed your Cat(s), and create a Cat Farm to earn more \$BNB.

Potential to grow with score points

1.	Project efficiency	7/10
2.	Project uniqueness	7/10
3	Information quality	6/10
4	Service quality	7/10
5	System quality	6/10
6	Impact on the community	7/10
7	Impact on the business	7/10
8	Preparing for the future	7/10
Total	6.75/10	

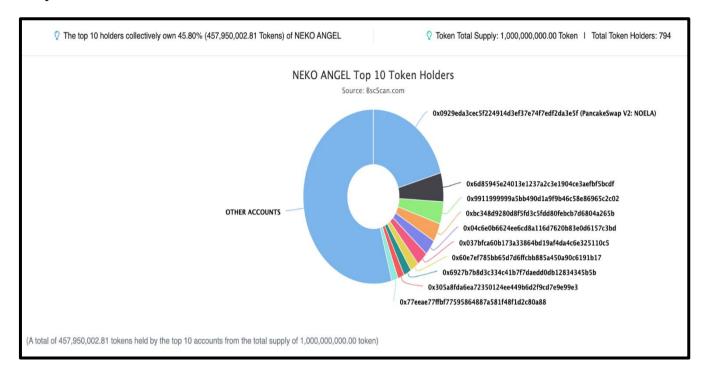
Contract details

Token contract details for 06th August 2021

Contract name	NEKO ANGEL Token
Contract address	0x37eBB7138122DF4954d14144b3a8E75279D89E3B
Token supply	1,000,000,000
Token ticker	NOELA
Decimals	18
Token holders	794
Transaction count	2,525
Top 100% holders dominance	87.28%
Dividend Tracker	0x6514d627a5fb5354ab4f5f6059f1afaad787c434
Liquidity wallet	0x6d85945e24013e1237a2c3e1904ce3aefbf5bcdf
Operation wallet	0x20f2005089d641b7b999a3c5dde25b10fc2b25c5
Contract deployer address	0x6d85945E24013E1237A2C3E1904CE3AEfBf5bcdf
Contract's current owner address	0x6d85945e24013e1237a2c3e1904ce3aefbf5bcdf

Top token holders

Top 10 Token Holders



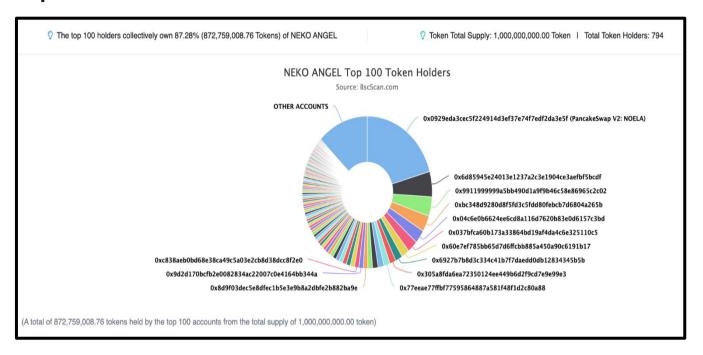
Rank	Address	Quantity (Token)	Percentage
1	PancakeSwap V2: NOELA	205,921,919.290293031776285694	20.5922%
2	0x6d85945e24013e1237a2c3e1904ce3aefbf5bcdf	53,690,849.777540888320457451	5.3691%
3	0x9911999999a5bb490d1a9f9b46c58e86965c2c02	41,105,677.231025201475978734	4.1106%
4	0xbc348d9280d8f5fd3c5fdd80febcb7d6804a265b	34,309,263.300131682784938828	3.4309%
5	0x04c6e0b6624ee6cd8a116d7620b83e0d6157c3bd	28,832,057.490568368010697453	2.8832%
6	0x037bfca60b173a33864bd19af4da4c6e325110c5	26,000,001.1	2.6000%
7	0x60e7ef785bb65d7d6ffcbb885a450a90c6191b17	20,116,852.943505289412292601	2.0117%
8	0x6927b7b8d3c334c41b7f7daedd0db12834345b5b	17,873,857.185235454441551742	1.7874%
9	0x305a8fda6ea72350124ee449b6d2f9cd7e9e99e3	15,099,524.49233499049082924	1.5100%
10	0x77eeae77ffbf77595864887a581f48f1d2c80a88	15,000,000	1.5000%

Token distribution

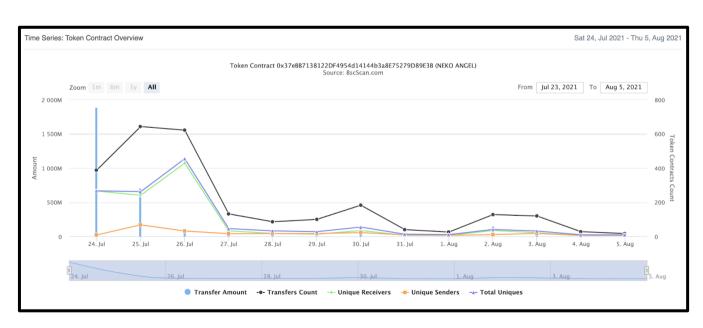
Tokens are distributed as follows:

❖ Burnt : 5%
 ❖ Contract : 47%
 ❖ Dev Wallet : 3%

Top 100 Token Holders



Contract interaction details



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
	Business security	Access control of owners	pass
3		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
	•			
NOELA	Implementation	ERC20, Ownable		
L		Public [ERC20
L		External [<u>c</u> p	NO
L	updateDividendTr acker	Public [onlyOwner
L	updateUniswapV2 Router	Public [onlyOwner
L	excludeFromFees	Public [onlyOwner
L	excludeMultipleAc countsFromFees	Public [onlyOwner
L	setAutomatedMark etMakerPair	Public [onlyOwner
L	_setAutomatedMa rketMakerPair	Private 🖺		
L	updateLiquidityWa llet	Public [onlyOwner
L	updateOperationW allet	Public [onlyOwner
L	updateGasForPro cessing	Public [onlyOwner
L	updateClaimWait	External [onlyOwner
L	getClaimWait	External [NO[
L	getTotalDividends Distributed	External [NO

L	isExcludedFromFe es	Public 🎚	NO
L	withdrawableDivid endOf	Public [NO
L	dividendTokenBal anceOf	Public [NO
L	getAccountDividen dsInfo	External [NO[
L	getAccountDividen dsInfoAtIndex	External [NO
L	processDividendTr acker	External [NO
L	claim	External [NO
L	getLastProcessedl ndex	External [NO
L	getNumberOfDivid endTokenHolders	External [NO[
L	excludeFromDivid ends	External [onlyOwner
L	includeDividends	External [onlyOwner
L	isPenaltyEnabled	Public [NO
L	getTradingIsEnabl ed	Public [NO]
L	setCanTransferBef oreTradingIsEnabl ed	Public [onlyOwner
L	setTradingEnabled Timestamp	Public [onlyOwner
L	setPenaltyDisable Block	Public [onlyOwner
L	_transfer	Internal 🖺	
L	swapAndLiquify	Private 🖺	
L	_swapTokensForE th	Private 🖺	

L	swapTokensForEt h	Private 🖺		
L	addLiquidity	Private 🖺		
L	swapAndSendOpe ration	Private 🖺		
L	swapAndSendDivi dends	Private 🖺		
NOELADividendTrac ker	Implementation	DividendPayingTo ken, Ownable		
L		Public 🎚		DividendPa yingToken
L	_transfer	Internal 🖺		
L	withdrawDividend	Public [NO
L	excludeFromDivid ends	External [onlyOwner
L	includeDividends	External [onlyOwner
L	updateClaimWait	External [onlyOwner
L	getLastProcessedl ndex	External [NO[
L	getNumberOfToke nHolders	External [NO
L	getAccount	Public [№Д
L	getAccountAtIndex	Public [NO[
L	canAutoClaim	Private 🖺		
L	setBalance	External [onlyOwner
L	process	Public [NO[
L	processAccount	Public 🎚		onlyOwner
			,	,
DividendPayingToke n	Implementation	ERC20, DividendPayingTo kenInterface,		

		DividendPayingTo kenOptionalInterfa ce		
L		Public 🎚		ERC20
L		External [CD	NO
L	distributeDividend s	Public [<u>an</u>	NO
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 🖺		
ERC20	Implementation	Context, IERC20, IERC20Metadata		
L		Public [NO[
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	_beforeTokenTran sfer	Internal 🖺			
	T		ı		
IERC20	Interface				
L	totalSupply	External [NO	
L	balanceOf	External [NO	
L	transfer	External [NO	
L	allowance	External [NO	
L	approve	External [МОД	
L	transferFrom	External [МОД	
IERC20Metadata	Interface	IERC20			
L	name	External [NO	
L	symbol	External [NO	
L	decimals	External [ио[
Context	Implementation				
L	_msgSender	Internal 🖺			

L	_msgData	Internal 🖺		
SafeMath	Library			
L	add	Internal 🖺		
L	sub	Internal 🖺		
L	sub	Internal 🖺		
L	mul	Internal 🖺		
L	div	Internal 🖺		
L	div	Internal 🖺		
L	mod	Internal 🖺		
L	mod	Internal 🖺		
SafeMathUint	Library			
L	toInt256Safe	Internal 🖺		
			T	
SafeMathInt	Library			
L	mul	Internal 🖺		
L	div	Internal 🖺		
L	sub	Internal 🖺		
L	add	Internal 🖺		
L	abs	Internal 🖺		
L	toUint256Safe	Internal 🖺		
	,	,		
DividendPayingToke nInterface	Interface			
L	dividendOf	External [NO
L	distributeDividend s	External [<u>db</u>	NOÏ

L	withdrawDividend	External [NO
DividendPayingToke nOptionalInterface	Interface		
L	withdrawableDivid endOf	External [NO[
L	withdrawnDividend Of	External [№
L	accumulativeDivid endOf	External [NO[
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
	T	I	
Ownable	Implementation	Context	
L		Public [NO
L	owner	Public [NO
L	renounceOwnershi p	Public [onlyOwner
L	transferOwnership	Public [onlyOwner
	I		
IUniswapV2Pair	Interface		
L	name	External [NOÎ
L	symbol	External [NO
L	decimals	External [NO

L	totalSupply	External [NO
L	balanceOf	External [NO
L	allowance	External 🌡	NO
L	approve	External [NO
L	transfer	External 🎚	NO
L	transferFrom	External 🎚	NO
L	DOMAIN_SEPAR ATOR	External [NO[
L	PERMIT_TYPEHA SH	External [NO[
L	nonces	External [NO
L	permit	External [NO
L	MINIMUM_LIQUID ITY	External [NO[
L	factory	External [NO
L	token0	External [ио[]
L	token1	External [NO[
L	getReserves	External 🎚	NO[
L	price0CumulativeL ast	External 🌡	NO
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[

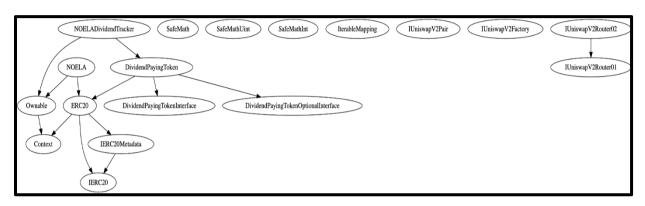
IUniswapV2Factory	Interface			
L	feeTo	External [№Д
L	feeToSetter	External [NO[
L	getPair	External [NO[
L	allPairs	External [NO
L	allPairsLength	External [NO
L	createPair	External [NO[
L	setFeeTo	External [NO[
L	setFeeToSetter	External [NO[
			I	
IUniswapV2Router01	Interface			
L	factory	External [NO
L	WETH	External [NO
L	addLiquidity	External [NO
L	addLiquidityETH	External [<u>d</u> 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>db</u>	NO
L	swapTokensForEx actETH	External [NO[

	T	T	-1	-
L	swapExactTokens ForETH	External [NO
L	swapETHForExact Tokens	External [CID	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 [ио[]
L	swapExactTokens ForTokensSupport ingFeeOnTransfer Tokens	External [NOÏ
L	swapExactETHFor TokensSupporting FeeOnTransferTo kens	External [āiÞ	NOÏ
L	swapExactTokens ForETHSupporting FeeOnTransferTo kens	External [NO

Legend

Symbol	Meaning
	Function can modify state
<u>U</u> D	Function is payable

Inheritance Hierarchy



Security issue checking status

- High severity issues No high severity issues found.
- Medium severity issues
 No medium severity issues found.
- Low severity issues
 No medium severity issues found.

Owner privileges

The owner can change the uniswap router address.

The owner can exclude accounts from fees.

❖ The owner can change the liquidity wallet.

```
ftrace|funcSig
function updateLiquidityWallet(address newLiquidityWallet↑)
   public
   onlyOwner
{
     require(
        newLiquidityWallet↑!= liquidityWallet,
        "NOELA: The liquidity wallet is already this address"
     );
     excludeFromFees(newLiquidityWallet↑, true);
     emit LiquidityWalletUpdated(newLiquidityWallet↑, liquidityWallet);
     liquidityWallet = newLiquidityWallet↑;
}
```

The owner can change the operation wallet.

```
ftrace|funcSig
function updateOperationWallet(address newOperationWallet1)
   public
   onlyOwner
{
    require(
        newOperationWallet1 != operationWallet,
        "NOELA: The operation wallet is already this address"
    );
   excludeFromFees(newOperationWallet1, true);
   emit OperationWalletUpdated(newOperationWallet1, operationWallet);
   operationWallet = newOperationWallet1;
}
```

❖ The owner can change the gas fee from 200000 to 500000.

The owner can change the claim wait.

```
ftrace|funcSig
function updateClaimWait(uint256 claimWait↑) external onlyOwner {
    dividendTracker.updateClaimWait(claimWait↑);
}
```

❖ The owner can include/exclude wallets from dividends.

```
ftrace|funcSig
function excludeFromDividends(address account1) external onlyOwner {
    return dividendTracker.excludeFromDividends(account1);
}

ftrace|funcSig
function includeDividends(address account1) external onlyOwner {
    return dividendTracker.includeDividends(account1, address(this).balance);
}
```

The owner can change trading enable time.

```
ftrace|funcSig
function setTradingEnabledTimestamp(uint256 newTimestamp_1)
    public
    onlyOwner
{
    tradingEnabledTimestamp = newTimestamp_1;
}
```

❖ The owner can whitelist wallets to send tokens when trading is disabled.

```
ftrace|funcSig
function setCanTransferBeforeTradingIsEnabled(address addr_1, bool val_1)
    public
    onlyOwner
{
        canTransferBeforeTradingIsEnabled[addr_1] = val_1;
}
```

Audit conclusion

While conducting the audit of the NEKO ANGEL smart contract, it was observed that there is nothing alarming with the code.