



# Audit Report

## **CitysHome**

January 2022

Type           BEP20

Network       BSC

Address       0x2989997e4f761d9f8Bb9fe668e4cC07a28C5F543

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## Contract Review

<b>Contract Name</b>	CitysHome
<b>Compiler Version</b>	v0.8.11+commit.d7f03943
<b>Optimization</b>	200 runs
<b>Licence</b>	None
<b>Explorer</b>	<a href="https://bscscan.com/token/0x2989997e4f761d9f8Bb9fe668e4cC07a28C5F543">https://bscscan.com/token/0x2989997e4f761d9f8Bb9fe668e4cC07a28C5F543</a>
<b>Symbol</b>	CHC
<b>Decimals</b>	18
<b>Total Supply</b>	50,000,000
<b>Source</b>	contract.sol
<b>Domain</b>	cityshome.io

## Audit Updates

<b>Initial Audit</b>	20th January 2022
<b>Corrected</b>	

# Contract Analysis

● Critical
 ● Medium
 ● Minor
 ● Pass

Severity	Code	Description
<span style="color: blue;">●</span>	ST	Contract Owner is not able to stop or pause transactions
<span style="color: blue;">●</span>	OCTD	Contract Owner is not able to transfer tokens from specific address
<span style="color: blue;">●</span>	OTUT	Owner Transfer User's Tokens
<span style="color: red;">●</span>	ELFM	Contract Owner is not able to increase fees more than a reasonable percent (25%)
<span style="color: blue;">●</span>	ULTW	Contract Owner is not able to increase the amount of liquidity taken by dev wallet more than a reasonable percent
<span style="color: blue;">●</span>	MT	Contract Owner is not able to mint new tokens
<span style="color: blue;">●</span>	BT	Contract Owner is not able to burn tokens from specific wallet
<span style="color: blue;">●</span>	BC	Contract Owner is not able to blacklist wallets from selling

## ELFM - Exceed Limit Fees Manipulation

<b>Criticality</b>	critical
<b>Location</b>	contract.sol#L624,L628

### Description

The contract owner has the authority to increase over the allowed limit of 25%. The owner may take advantage of it by calling the `setBurnFee` function with a high percentage value.

```
function setBurnFee(uint256 fee) public onlyOwner {  
    burnFee = fee;  
}
```

### Recommendation

The contract could embody a check for the maximum acceptable value.

The team should carefully manage the private keys of the owner's account. We strongly recommend a powerful security mechanism that will prevent a single user from accessing the contract admin functions. That risk can be prevented by temporarily locking the contract or renouncing ownership.

# Contract Diagnostics

● Critical    ● Medium    ● Minor

Severity	Code	Description
●	L01	Public Function could be Declared External
●	L02	State Variables could be Declared Constant
●	L04	Conformance to Solidity Naming Conventions
●	L09	Dead Code Elimination
●	L07	Missing Events Arithmetic

## L01 - Public Function could be Declared External

**Criticality**

minor

**Location**

contract.sol#L632,L628,L624 and 12 more

### Description

Public functions that are never called by the contract should be declared external to save gas.

```
setSwapFee  
setBurnFee  
setSwapAddress  
...
```

### Recommendation

Use the external attribute for functions never called from the contract



## L02 - State Variables could be Declared Constant

**Criticality**

minor

**Location**

contract.sol#L587,L581,L589 and 5 more

### Description

Constant state variables should be declared constant to save gas.

```
teamAddress  
presaleAddress  
marketingAddress  
...
```

### Recommendation

Add the constant attribute to state variables that never change.

## L04 - Conformance to Solidity Naming Conventions

**Criticality**

minor

**Location**

contract.sol#L599

### Description

Solidity defines a naming convention that should be followed. Rule exceptions:

- Allow constant variable name/symbol/decimals to be lowercase.
- Allow \_ at the beginning of the mixed\_case match for private variables and unused parameters.

PVP

### Recommendation

Follow the Solidity naming convention.

<https://docs.soliditylang.org/en/v0.4.25/style-guide.html#naming-conventions>

## L09 - Dead Code Elimination

**Criticality**

minor

**Location**

contract.sol#L488,L22

### Description

Functions that are not used in the contract, and make the code's size bigger.

```
_burn  
_msgData
```

### Recommendation

Remove unused functions.

## L07 - Missing Events Arithmetic

**Criticality**

minor

**Location**

contract.sol#L632,L628

### Description

Detected missing events for critical arithmetic parameters. There are functions that have no event emitted, so it is difficult to track off-chain changes.

```
liquidityFee = fee  
burnFee = fee
```

### Recommendation

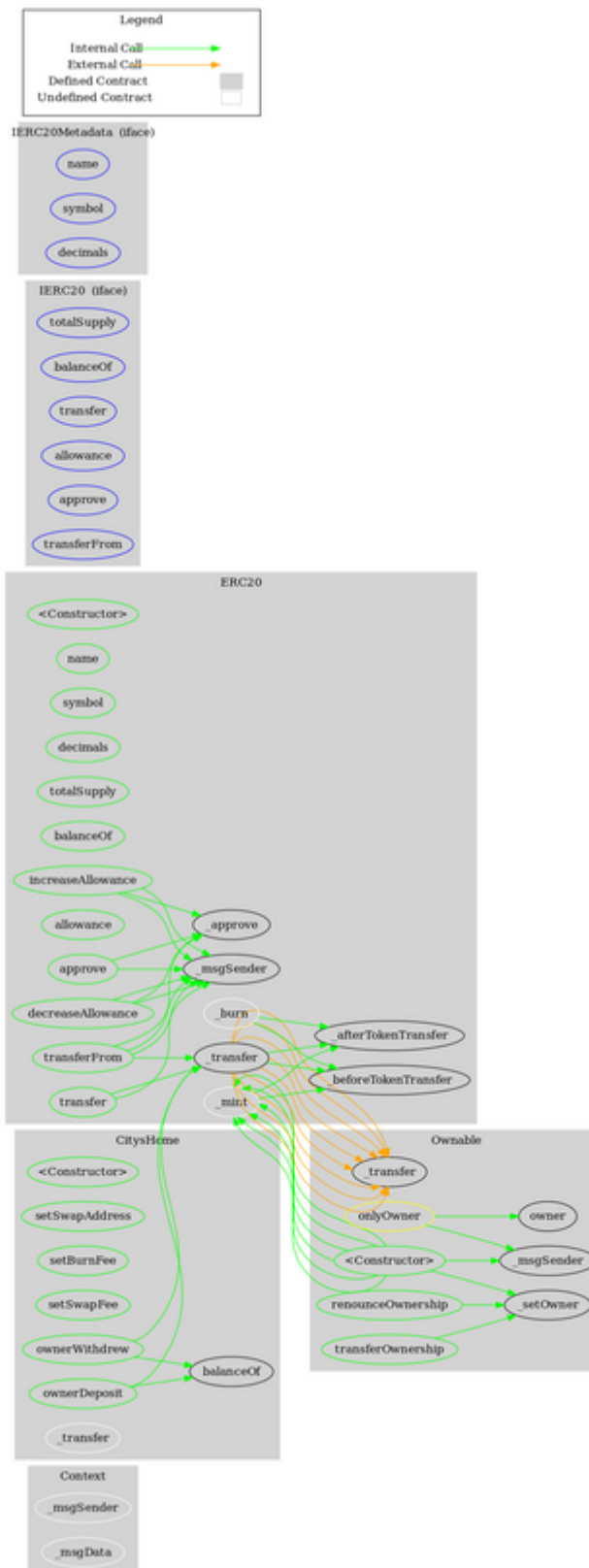
Emit an event for critical parameter changes.

# Contract Functions

Contract	Type	Bases		
	Function Name	Visibility	Mutability	Modifiers
<b>Context</b>	Implementation			
	_msgSender	Internal		
	_msgData	Internal		
<b>Ownable</b>	Implementation	Context		
	<Constructor>	Public	✓	-
	owner	Public		-
	renounceOwnership	Public	✓	onlyOwner
	transferOwnership	Public	✓	onlyOwner
	_setOwner	Private	✓	
<b>IERC20</b>	Interface			
	totalSupply	External		-
	balanceOf	External		-
	transfer	External	✓	-
	allowance	External		-
	approve	External	✓	-
	transferFrom	External	✓	-
<b>IERC20Metadata</b>	Interface	IERC20		
	name	External		-
	symbol	External		-
	decimals	External		-
<b>ERC20</b>	Implementation	Context, IERC20, IERC20Metadata		
	<Constructor>	Public	✓	-

	name	Public		-
	symbol	Public		-
	decimals	Public		-
	totalSupply	Public		-
	balanceOf	Public		-
	transfer	Public	✓	-
	allowance	Public		-
	approve	Public	✓	-
	transferFrom	Public	✓	-
	increaseAllowance	Public	✓	-
	decreaseAllowance	Public	✓	-
	_transfer	Internal	✓	
	_mint	Internal	✓	
	_burn	Internal	✓	
	_approve	Internal	✓	
	_beforeTokenTransfer	Internal	✓	
	_afterTokenTransfer	Internal	✓	
<b>CitysHome</b>	Implementation	ERC20, Ownable		
	<Constructor>	Public	✓	ERC20
	setSwapAddress	Public	✓	onlyOwner
	setBurnFee	Public	✓	onlyOwner
	setSwapFee	Public	✓	onlyOwner
	ownerWithdraw	Public	✓	onlyOwner
	ownerDeposit	Public	✓	onlyOwner
	_transfer	Internal	✓	

# Contract Flow



## Domain Info

<b>Domain Name</b>	cityshome.io
<b>Registry Domain ID</b>	30c56385a49646c192d525d1a3ad5dd9-DONUTS
<b>Creation Date</b>	2022-01-15T08:16:05Z
<b>Updated Date</b>	2022-01-20T08:16:46Z
<b>Registry Expiry Date</b>	2023-01-15T08:16:05Z
<b>Registrar WHOIS Server</b>	whois.namesilo.com
<b>Registrar URL</b>	<a href="http://www.namesilo.com">http://www.namesilo.com</a>
<b>Registrar</b>	NameSilo, LLC
<b>Registrar IANA ID</b>	1479

The domain has been created 5 days before the creation of the audit. It will expire in 12 months.

There is no public billing information, the creator is protected by the privacy settings.



## Summary

CitysHome is aiming to build an NFT play-to-earn game. The token has a friendly and growing community. The Smart Contract analysis reported one issue. The contract owner can manipulate the fees. A multi-wallet signing pattern will provide security against potential hacks. Temporarily locking the contract or renouncing ownership will eliminate all the contract threats.

# Disclaimer

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Coinscope is the leading early coin listing, voting and auditing authority firm. The audit process is analyzing and monitoring many aspects of the project. That way, it gives the community a good sense of security using an informative report and a generic score.

Coinscope is aiming to make crypto discoverable and efficient globally. It provides all the essential tools to assist users draw their own conclusions.



The Coinscope.co team

<https://www.coinscope.co>