TechRate
November, 2023

SMART CONTRACTS SECURITY AUDIT REPORT

Techrate_audits Techrate Techrate1

Audit Details

Audited project

BANNOCHMOOR

Deployer address

Not deployed

Client contacts:

BANNOCHMOOR team

Blockchain

Not deployed

Project website:

www.bannochmoor.com

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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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

TechRate was commissioned by BANNOCHMOOR to perform an audit of smart contracts:

- 11-7-2023 Bannochmoor.sol

The purpose of the audit was to achieve the following:

- Ensure that the smart contract functions as intended.
- Identify potential security issues with the smart contract.

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

Issues Checking Status

	Issue description	Checking status
1.	**Compiler errors.**	Passed
2.	**Race conditions and Reentrancy. Cross-function race conditions.**	Passed
3.	**Possible delays in data delivery.**	Passed
4.	**Oracle calls.**	Passed
5.	**Front running.**	Passed
6.	**Timestamp dependence.**	Passed
7.	**Integer Overflow and Underflow.**	Passed
8.	**DoS with Revert.**	Passed
9.	**DoS with block gas limit.**	Low issues
10.	**Methods execution permissions.**	Passed
11.	**Economy model of the contract.**	Passed
12.	**The impact of the exchange rate on the logic.**	Passed
13.	**Private user data leaks.**	Passed
14.	**Malicious Event log.**	Passed
15.	**Scoping and Declarations.**	Passed
16.	**Uninitialized storage pointers.**	Passed
17.	**Arithmetic accuracy.**	Low issues
18.	**Design Logic.**	Passed
19.	**Cross-function race conditions.**	Passed
20.	**Safe Open Zeppelin contracts implementation and usage.**	Passed
21.	**Fallback function security.**	Passed

Security Issues

High Severity Issues

No high severity issues found.

Medium Severity Issues

No medium severity issues found.

Low Severity Issues

1. Out of gas

Issue:

- The function `multiSendTokens()` uses the loop to send tokens to accounts array. Function will be aborted with OUT_OF_GAS exception if there will be a long addresses list.

Recommendation:
Check that the array length is not too big.

2. Ratio count

Issue:

- The function `contractSwap()` sets marketingBalance eqal to amtBalance, without subtracting propertyBalance part, so propertyBalance will never be send.

Recommendation:
Recalculate marketingBalance.

Notes:

- contractSwap() function counts amtBalance as address(this).balance, but better to count it as difference between actual balance and after swap balance.
- IRouter01 interface uses uint instead of uint256.

Owner privileges (In the period when the owner is not renounced)

- Owner can approve the contract to spend an infinite amount of tokens.
- Owner can set a new router address for the contract.
- Owner can add and enable or disable a liquidity pair.
- Owner can set the initializer address for the contract.
- Owner can set whether an account is excluded from fees.
- Owner can set whether an account is excluded from transfer protection.
- Owner can enable or disable blacklist for a specific account.
- Owner can enable or disable blacklist for multiple accounts.
- Owner can remove an account from the blacklist.
- Owner can remove an account from the sniper list.
- Owner can set protection settings.
- Owner can lock the taxes at their current value.
- Owner can set the buy, sell, and transfer fees.
- Owner can set the ratios for property, liquidity, and marketing.
- Owner can set the marketing and property wallet addresses.
- Owner can set the swap settings.
- Owner can set the price impact swap percent.
- Owner can enable or disable contract swaps and price impact swaps.
- Owner can exclude presale addresses from fees.
- Owner can sweep the contingency.
- Owner can sweep external tokens.
- Owner can send tokens to multiple addresses.

Conclusion

Smart contracts contain low severity issues! Liquidity pair contract's security is not checked due to out of scope. The further transfers and operations with the funds raise are not related to this particular contract.

Liquidity locking details are NOT provided by the team.

Security score: 80.

TechRate note:
Please check the disclaimer above and note, the audit makes no statements or warranties on business model, investment attractiveness or code sustainability. The report is provided for the only contract mentioned in the report and does not include any other potential contracts deployed by Owner.