SPYWOLF

Security Audit Report

Audit prepared for

Bonfire

Completed on

January 24, 2025

OVERVIEW

This goal of this report is to review the main aspects of the project to help investors make an informative decision during their research process.

You will find a a summarized review of the following key points:

- ✔ Contract's source code
- ✔ Owners' wallets
- ✔ Tokenomics
- ✔ Team transparency and goals
- ✔ Website's age, code, security and UX
- ✔ Whitepaper and roadmap
- ✔ Social media & online presence

The results of this audit are purely based on the team’s evaluation and does not guarantee nor reflect the projects outcome and goal

- SPYWOLF Team -

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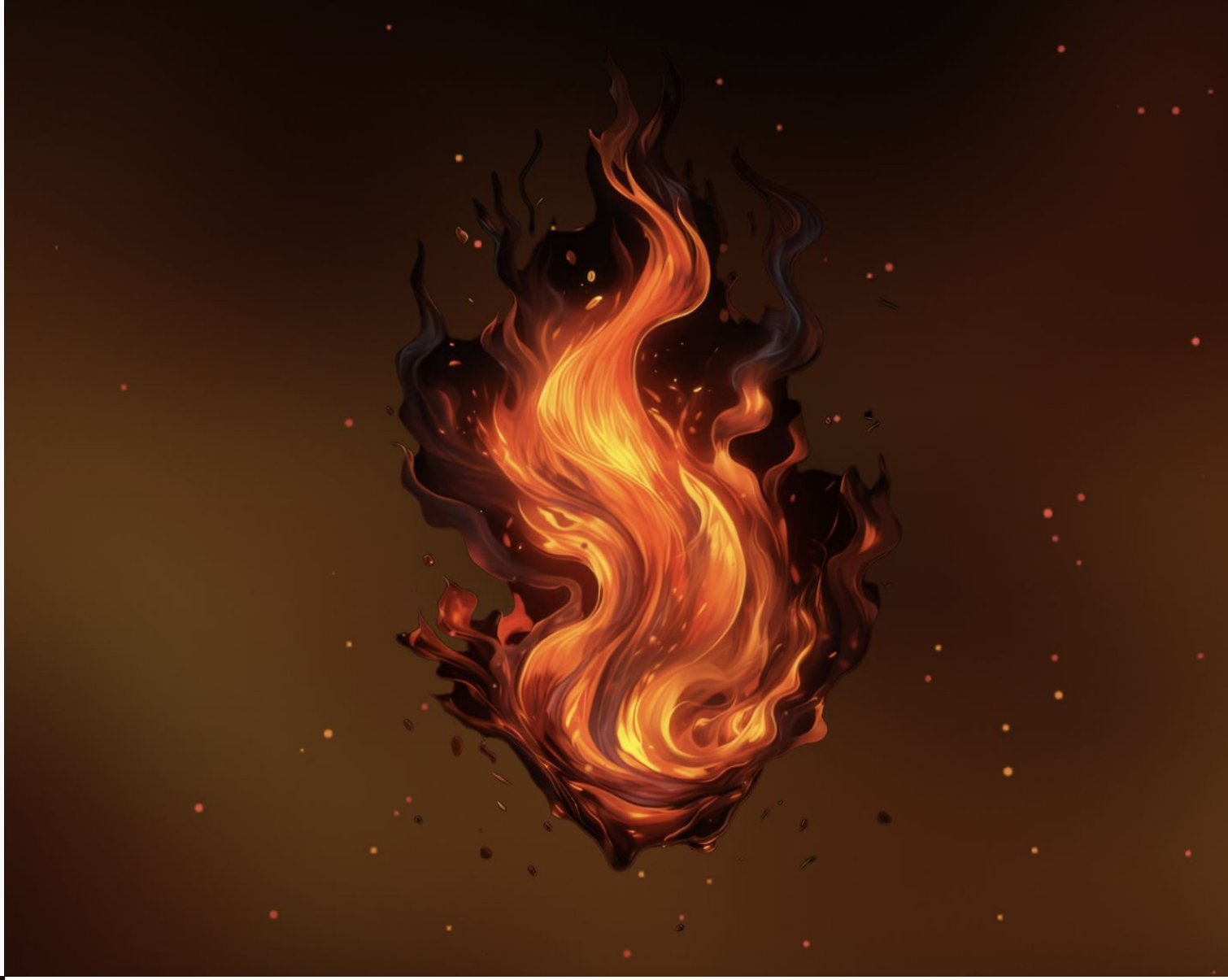
BonFire



PROJECT DESCRIPTION:

According to their whitepaper:

BonFire (BFX) is an innovative decentralized finance (DeFi) project built on the X28 ecosystem, leveraging cutting-edge Smart Burn Technology to revolutionize traditional buy-and-burn protocols. BonFire is designed to maximize the efficiency and impact of buy-and-burn mechanisms, elevating deflationary tokenomics to new heights.

Key Features:

Fair Launch: Combines a virtual mining and auction hybrid model for equitable access.
Decentralized & Deflationary: Focused on community empowerment and a robust burning mechanism.
Smart Burn Power: The ultimate engine driving BonFire's unique deflationary model.

BFX Token Info

Token Name
BonFire

Symbol
BFX

Contract Address
0x65c55F33F9493E8702FEea89B4fA357283eD3841

Network
ETH

Language
Solidity

Deployment Date
Jan 20, 2025

Contract Type
Mintable token

Total Supply
642,791,179

Decimals
18

TAXES

Buy Tax
16%

Sell Tax
0%

*"Buy tax" to be readed as "Mint tax".
Mint taxes are distributed towards: LP (8%), Dev (4%) and GENESIS (4%) addresses.

Our Contract Review Process

The contract review process pays special attention to the following:

- Testing the smart contracts against both common and uncommon vulnerabilities
- Assessing the codebase to ensure compliance with current best practices and industry standards.
- Ensuring contract logic meets the specifications and intentions of the client.
- Cross referencing contract structure and implementation against similar smart contracts produced by industry leaders.
- Thorough line-by-line manual review of the entire codebase by industry experts.

Blockchain security tools used:

- OpenZeppelin
- Mythril
- Solidity Compiler
- Hardhat

VULNERABILITY ANALYSIS

ID	Title	
SWC-100	Function Default Visibility	**Passed**
SWC-101	Integer Overflow and Underflow	**Passed**
SWC-102	Outdated Compiler Version	**Passed**
SWC-103	Floating Pragma	**Passed**
SWC-104	Unchecked Call Return Value	**Passed**
SWC-105	Unprotected Ether Withdrawal	**Passed**
SWC-106	Unprotected SELFDESTRUCT Instruction	**Passed**
SWC-107	Reentrancy	**Passed**
SWC-108	State Variable Default Visibility	**Passed**
SWC-109	Uninitialized Storage Pointer	**Passed**
SWC-110	Assert Violation	**Passed**
SWC-111	Use of Deprecated Solidity Functions	**Passed**
SWC-112	Delegatecall to Untrusted Callee	**Passed**
SWC-113	DoS with Failed Call	**Passed**
SWC-114	Transaction Order Dependence	**Passed**
SWC-115	Authorization through tx.origin	**Passed**
SWC-116	Block values as a proxy for time	**Passed**
SWC-117	Signature Malleability	**Passed**
SWC-118	Incorrect Constructor Name	**Passed**

VULNERABILITY ANALYSIS

ID	Title	
SWC-119	Shadowing State Variables	Passed
SWC-120	Weak Sources of Randomness from Chain Attributes	Passed
SWC-121	Missing Protection against Signature Replay Attacks	Passed
SWC-122	Lack of Proper Signature Verification	Passed
SWC-123	Requirement Violation	Passed
SWC-124	Write to Arbitrary Storage Location	Passed
SWC-125	Incorrect Inheritance Order	Passed
SWC-126	Insufficient Gas Griefing	Passed
SWC-127	Arbitrary Jump with Function Type Variable	Passed
SWC-128	DoS With Block Gas Limit	Passed
SWC-129	Typographical Error	Passed
SWC-130	Right-To-Left-Override control character (U+202E)	Passed
SWC-131	Presence of unused variables	Passed
SWC-132	Unexpected Ether balance	Passed
SWC-133	Hash Collisions With Multiple Variable Length Arguments	Passed
SWC-134	Message call with hardcoded gas amount	Passed
SWC-135	Code With No Effects	Passed
SWC-136	Unencrypted Private Data On-Chain	Passed

VULNERABILITY ANALYSIS

NO ERRORS FOUND

MANUAL
CODE REVIEW

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 4 different threat levels.

THREAT 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.

FOUND THREATS

⚠ High Risk

No high risk-level threats found in this contract.

⚠ Medium Risk

No medium risk-level threats found in this contract.

⚠ Low Risk

No low risk-level threats found in this contract.

FOUND THREATS

Informational

Proceed with caution when changing swap paths.
Ensure to always insert the correct swap path and pool fees between tokens.
Incorrectly set path and/or pool fees might lead to transactions revert and/or loss of funds if wrong pool is targeted.

```
function setAllowedToken(
    address token,
    address[] memory swapPath,
    uint24[] memory feeTiers
) external {
    if (msg.sender != address(genesisAddress) && msg.sender != address(devAddress)
    && msg.sender != address(owner())) revert BFX_NotAllowed();
    if (token.code.length == 0) revert BFX_InvalidAddress();
    require(swapPath.length == feeTiers.length + 1, "Invalid swap path or fee tiers length");
    allowedTokens[token] = TokenSwapInfo(swapPath, feeTiers);
    emit ParameterUpdated();
}
```

FOUND THREATS

Informational

Genesis and devAddress have the ability to update the buyAndBurn contract address using the setBuyAndBurnContractAddress function. BurnContractAddress can initiate new tokens mint once.

The buyAndBurn address itself holds key privileges, including the ability to adjust the recyclePoolAmount through depositRecycle.

```
function setBuyAndBurnContractAddress(address contractAddress) external {
    if (contractAddress == address(0)) revert BFX_InvalidAddress();
    if (contractAddress.code.length == 0) revert BFX_InvalidAddress();
    if (msg.sender != address(genesisAddress) && msg.sender != address(devAddress)) revert BFX_NotAllowed();
    buyAndBurn = BonFireBuyAndBurn(contractAddress);
    IERC20(X28_ADDRESS).approve(address(buyAndBurn), type(uint256).max);
    emit ParameterUpdated();
}

function mintLPTokens() external {
    if (_msgSender() != address(buyAndBurn)) revert OnlyBuyAndBurn();
    if (lpAdded) revert BFX_NotAllowed();
    _mint(address(buyAndBurn), INITIAL_LP_MINT);
    lpAdded = true;
}

function depositRecycle(uint256 amount) external {
    if (_msgSender() != address(buyAndBurn)) revert OnlyBuyAndBurn();
    recyclePoolAmount += amount;
}
```

FOUND THREATS

Informational

`Genesis` and `devAddress` can change percent of tokens for LP allocation up to 8%.
The `setLpPercent` function allows `genesis` and `devAddress` to adjust the percentage of tokens allocated for LP (Liquidity Pool) within specified limits:

- Up to 8% during the first 367 cycles.
- Up to 1% after the 367th cycle.

```
function setLpPercent(uint32 _newLpPercent) external {
    if (msg.sender != address(genesisAddress) && msg.sender != address(devAddress)) revert BFX_NotAllowed();
    LP_BPS = _newLpPercent;
    if (currentCycle <= 367) {
        require(LP_BPS <= 800, "Maximum 8 percent to LP allowed.");
    } else {
        require(LP_BPS <= 100, "Maximum 1 percent to LP allowed.");
    }
    emit ParameterUpdated();
}
```

`Genesis` and `devAddress` can change percent of tokens for LP allocation up to 7%.

```
function setNewGenesisAddress(address newGenesisAddress) external {
    if (_msgSender() != genesisAddress) revert BFX_NotAllowed();
    if (newGenesisAddress == address(0)) revert BFX_InvalidAddress();
    genesisAddress = newGenesisAddress;
    emit ParameterUpdated();
}

function setNewDevAddress(address newDevAddress) external {
    if (_msgSender() != devAddress) revert BFX_NotAllowed();
    if (newDevAddress == address(0)) revert BFX_InvalidAddress();
    devAddress = newDevAddress;
    emit ParameterUpdated();
}
```

BFX BuyAndBurn Info

Token Name
unavailable

Symbol
unavailable

Contract Address
0x680675B60c854DD634c06C14ec75B814cAfa48DD

Network
ETH

Language
Solidity

Deployment Date
Jan 20, 2025

Contract Type
Buy and burn interface

Total Supply
unavailable

Decimals
unavailable

TAXES

Buy Tax
0%

Sell Tax
0%

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FOUND THREATS

High Risk

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Medium Risk

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Low Risk

No low risk-level threats found in this contract.

FOUND THREATS

Informational

Genesis and devAddress can change settings like allocation amounts per day and allocation's multipliers.

```
function setBurnSettings(
    uint256 _newDailyAllocation, uint32 _firstMultiplier, uint32 _secondMultiplier,
    uint32 _thirdMultiplier, uint32 _fourthMultiplier, uint32 _fifthMultiplier,
    uint32 _firstPercent, uint32 _secondPercent, uint32 _thirdPercent,
    uint32 _fourthPercent, uint32 _fifthPercent
) external {
    if (msg.sender != address(bfxToken.genesisAddress()) && msg.sender != address(bfxToken.devAddress())) revert NotAllowed();

    DAILY_ALLOCATION = _newDailyAllocation;
    FIRST_MULTIPLIER = _firstMultiplier;
    SECOND_MULTIPLIER = _secondMultiplier;
    THIRD_MULTIPLIER = _thirdMultiplier;
    FOURTH_MULTIPLIER = _fourthMultiplier;
    FIFTH_MULTIPLIER = _fifthMultiplier;
    FIRST_PERCENT = _firstPercent;
    SECOND_PERCENT = _secondPercent;
    THIRD_PERCENT = _thirdPercent;
    FOURTH_PERCENT = _fourthPercent;
    FIFTH_PERCENT = _fifthPercent;

    uint256 maxMultiplier = (18e5 / DAILY_ALLOCATION);

    require(
        DAILY_ALLOCATION >= 100 && DAILY_ALLOCATION <= 1000,
        "DAILY_ALLOCATION must be between 100 (1%) and 1000 (10%)"
    );
    require(
        FIRST_MULTIPLIER >= 100 && FIRST_MULTIPLIER <= maxMultiplier &&
        SECOND_MULTIPLIER >= 100 && SECOND_MULTIPLIER <= maxMultiplier &&
        THIRD_MULTIPLIER >= 100 && THIRD_MULTIPLIER <= maxMultiplier &&
        FOURTH_MULTIPLIER >= 100 && FOURTH_MULTIPLIER <= maxMultiplier &&
        FIFTH_MULTIPLIER >= 100 && FIFTH_MULTIPLIER <= maxMultiplier,
        "Multiplier exceeds allowed maximum"
    );

    _intervalUpdate();

    emit ParameterUpdated();
}
```

FOUND THREATS

Informational

Genesis and devAddress can change liquidity add tokens threshold.

```
function setLpAddThreshold(uint8 newThreshold) external {
    if (msg.sender != address(bfxToken.genesisAddress())
    && msg.sender != address(bfxToken.devAddress())) revert NotAllowed();
    lpAddThreshold = newThreshold;
    require(lpAddThreshold >= 2, "Invalid threshold");
}
```

Genesis and devAddress can set slippage for intertokens swaps.

```
function setSlippages(uint8 _titanXToX28Slippage, uint8 _x28ToBonFireSlippage,
uint8 _titanXToE280Slippage, uint8 _titanXToDragonXSlippage, uint8 _dragonXToMorphSlippage) external {
    if (msg.sender != address(bfxToken.genesisAddress())
    && msg.sender != address(bfxToken.devAddress())) revert NotAllowed();
    if (_titanXToX28Slippage > 100 || _titanXToX28Slippage < 2) revert InvalidInput();
    if (_x28ToBonFireSlippage > 100 || _x28ToBonFireSlippage < 2) revert InvalidInput();
    if (_titanXToE280Slippage > 100 || _titanXToE280Slippage < 2) revert InvalidInput();
    if (_titanXToDragonXSlippage > 100 || _titanXToDragonXSlippage < 2) revert InvalidInput();
    if (_dragonXToMorphSlippage > 100 || _dragonXToMorphSlippage < 2) revert InvalidInput();

    titanXToX28Slippage = _titanXToX28Slippage;
    x28ToBonFireSlippage = _x28ToBonFireSlippage;
    titanXToE280Slippage = _titanXToE280Slippage;
    titanXToDragonXSlippage = _titanXToDragonXSlippage;
    dragonXToMorphSlippage = _dragonXToMorphSlippage;

    emit ParameterUpdated();
}
```

BFX LP Adder Info

Token Name
unavailable

Symbol
unavailable

Contract Address
0xC88887a8D1e7EE86a41ff8a9b8764CC5EF52f81d

Network
ETH

Language
Solidity

Deployment Date
Jan 20, 2025

Contract Type
Liquidity adder

Total Supply
unavailable

Decimals
unavailable

TAXES

Buy Tax
0%

Sell Tax
0%

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⚠ Low Risk

No low risk-level threats found in this contract.

FOUND THREATS

Informational

Only buyAndBurn address can initiate addLP.

```
function addLP(uint256 _deadline) external {
    if (msg.sender != address(bfxToken.buyAndBurn())) revert Not_Allowed();
    if (IERC20(X28_ADDRESS).balanceOf(address(this)) == 0) revert Insufficient_Balance();

    uint256 allowance = IERC20(X28_ADDRESS).allowance(address(this), address(bfxToken.buyAndBurn()));
    if (allowance < IERC20(X28_ADDRESS).balanceOf(address(this))) {
        IERC20(X28_ADDRESS).approve(address(bfxToken.buyAndBurn()), type(uint256).max);
    }

    BonFireBuyAndBurn(bfxToken.buyAndBurn()).increaseLiquidity(IERC20(X28_ADDRESS).balanceOf(address(this)), _deadline);

    emit LPAdded(IERC20(X28_ADDRESS).balanceOf(address(this)), msg.sender);
}
```

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Disclaimer

This report shows findings based on our limited project analysis, following good industry practice from the date of this report, in relation to cybersecurity vulnerabilities and issues in the framework and algorithms based on smart contracts, overall social media and website presence and team transparency 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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No applications were reviewed for security. No product code has been reviewed.