

### **Alliance for Water Stewardship (AWS)**

Audit Number: AO-000739

#### SITE DETAILS

Site: BAT Mozambique - Maputo

Address: Angola Av. 2289, 1104, Maputo, MOZAMBIQUE

Contact Person: Ednalva Jamisse Matola AWS Reference Number: AWS-000561

Site Structure: Single Site

#### **CERTIFICATION DETAILS**

Certification status: Certified Core

Date of certification decision: 2023-Nov-15

Validity of certificate: 2026-Nov-15

#### **AUDIT DETAILS**

Audited Service(s): AWS Standard v2.0 (2019)

Audit Type(s): Initial Audit Audit Start Date: 2023-Sep-26 Lead Auditor: Warrick Stewart

Audit team participants:

Gilda Uaciquete, Local Auditor Warrick Stewart, Lead Auditor

Site Participants:

Jaime Sibia, Operations and Supply Chain Ednalva Jamisse Matola, BAT Mozambique EHS Co-ordinator Hoceia Artigo Registo Mapule, BAT Mozambique EHS Co-ordinator

#### **AUDIT TIMES**

Dates	Audit from	Duration	Auditor	Description
2023-Sep-2 6	08:00:00 - 17:15:00	09:15	Warrick Stewart	
2023-Sep-2 7	08:00:00 - 17:00:00	09:00	Warrick Stewart	
2023-Sep-2 8	08:00:00 - 13:00:00	05:00	Warrick Stewart	



### **Alliance for Water Stewardship (AWS)**

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#### **ADDITIONAL INFO**

Summary of Audit Findings: A total of 24 findings were raised during the certification audit, 0 major non-conformities, 10 minor non-conformities, and 14 observations.

The Client is requested to perform a root cause analysis and define corrective actions for each of the non-conformities and to submit these to WSAS within 60 days of receipt of the audit report by 01/01/2024.

Minor non-conformities must be closed out by the time of the next annual audit.

The audit team recommends certification of the BAT Mozambique - Maputo site at Core level pending approval of the corrective actions plan.

#### CLOSURE OF FINDINGS AND CORRECTIVE ACTION PLAN:

The Client has successfully submitted the corrective action plans addressing all findings. Proof of implementation has been requested for the Minors and this will be evaluated during the Surveillance Audit. The client is requested to upload evidence of implementation prior to the Surveillance Audit.



### **Alliance for Water Stewardship (AWS)**

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Scope of Assessment: The scope of services covers the Initial certification audit for assessing conformity of BAT Mozambique - Maputo against the AWS International Water Stewardship Standard Version 2.

The BAT Mozambique site is situated in the capital city, Maputo along the Avenida de Angola Road. The site is surrounded by several factories lined up across the 5 km of land and nearby residential areas. The site was established in 2000 and is 15,600 sqm is size. The site produces cigarettes with input materials sourced locally, regionally, and nationally, based on market demand.

The site owns and operates various forms of water related infrastructure on its site which ranges from on-site borehole, abstracted water storage tanks, water pumps, and intricate network of conveyance pipes which transport water to and from various water use and discharge points. The water is used in various points including cleaning and sanitizing, canteen and kitchen, tree watering, cooling systems and fire system. The ultimate water source is the Grande Maputo Aquifer. The drinking water consumed on site is supplied by a third-party, which obtains its water from within the catchment.

The facility is located in the Umbeluzi catchment.

The audit was conducted onsite from 26 to 28 September 2023.

The onsite site visit included the assessment of the site's manufacturing plant, offices, canteen, warehousing, chemical stores, input material stores, diesel generator, borehole, water pumps, input water storage tanks, septic tanks, soak-aways, cooling towers, storm water system, waste facilities, bathrooms, showers, and associated water-related pipework (onsite) as part of the audit.

The following external stakeholders were interviewed during the audit:

- Luisa Da Conceicao (Technician): DNGRH (Direcção Nacional de Gestão de Recursos Hídricos: Ministério das Obras Públicas, Habitação e Recursos Hídricos/National Directorate of Water Resources Management: Ministry of Public Works, Housing and Water Resources)
- Carlos Tembe (Technician): DNGRH (Direcção Nacional de Gestão de Recursos Hídricos: Ministério das Obras Públicas, Habitação e Recursos Hídricos/National Directorate of Water Resources Management: Ministry of Public Works, Housing and Water Resources)
- Amelia Mabota (Technician): DNAAS (Direcção Nacional de Abastecimento de Água e Saneamento: Ministério das Obras Públicas, Habitação e Recursos Hídricos/National Directorate of Water Supply and Sanitation: Ministry of Public Works, Housing and Water Resources)
- Lizete Dias (Chefe do Departamento de Recoursos Hidricos/Head of the Water Resources Department): ARA-SUL (Administração Regional de Águas de Sul/Southern Regional Water Administration).
- Leonel Bila (Technician): ARA-SUL (Administração Regional de Águas de Sul/Southern Regional Water Administration)
- Antonio Vilanculos: (Technician): FiPAG (Fundo de Investimento e Património do Abastecimento de Água é uma instituição/Water Supply Investment and Heritage Fund)
- Silvio Machachane(Technician): FiPAG (Fundo de Investimento e Património do Abastecimento de Água é uma instituição/Water Supply Investment and Heritage Fund)
- Paulo Junior (Technician): FiPAG (Fundo de Investimento e Património do Abastecimento de Água é uma instituição/Water Supply Investment and Heritage Fund).

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### **Alliance for Water Stewardship (AWS)**

Audit Number: AO-000739

#### **FINDINGS**

**NUMBER OF FINDINGS PER LEVEL** 

Observation 14 Minor 10



### **Alliance for Water Stewardship (AWS)**

Audit Number: AO-000739

#### **FINDING DETAILS**

Finding No: TNR-006474

Checklist Item No: 1.1.1

Status: In Progress - CA plan approved

Finding level: Minor

Due date: 2024-Sep-24

Checklist item: The physical scope of the site shall be mapped, considering the

regulatory landscape and zone of stakeholder interests, including:

- Site boundaries;

- Water-related infrastructure, including piping network, owned or

managed by the site or its parent organization;

- Any water sources providing water to the site that are owned or

managed by the site or its parent organization;

- Water service provider (if applicable) and its ultimate water source;

- Discharge points and waste water service provider (if applicable) and

ultimate receiving water body or bodies;

- Catchment(s) that the site affect(s) and is reliant upon for water.

Findings: The site needs to correct its map of the ETAR WWTW discharge point

into the Maputo Bay.

Corrective action: Conduct consultation to determine the discharge point where the

Maputo Bay receive the treated waste water

Finding No: TNR-006111

Checklist Item No: 1.2.1 Status: Open

Finding level: Observation

Due date: 2024-Sep-24

Checklist item: Stakeholders and their water-related challenges shall be identified. The

process used for stakeholder identification shall be identified. This

process shall:

- Inclusively cover all relevant stakeholder groups including vulnerable,

women, minority, and Indigenous people;

- Consider the physical scope identified, including stakeholders,

representative of the site's ultimate water source and ultimate receiving

water body or bodies;

- Provide evidence of stakeholder consultation on water-related interests

and challenges;

- Note that the ability and/or willingness of stakeholders to participate

may vary across the relevant stakeholder groups;

- Identify the degree of stakeholder engagement based on their level of

interest and influence.

Findings: The site should consider whether the protected area agency

(Administração Nacional das Áreas de Conservação (ANAC)) for the Parque Nacional de Maputo (Maputo National Park) should be added as a stakeholder due to the site's effluent being treated at the ETAR Waste

Water Treatment Works (WWTW), and then ultimately being

discharged into Maputo Bay.

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### **Alliance for Water Stewardship (AWS)**

Audit Number: AO-000739

Finding No: TNR-006088

Checklist Item No: 1.3.1 Status: Open

Finding level: Observation

Due date: 2024-Sep-24

Checklist item: Existing water-related incident response plans shall be identified.

Findings: Opportunity exists to expand the BCP to comprehensively cover all the

potential water-related emergency incidents identified in

1.3.1\_INCIDENT RESPONSE PLANS IDENTIFICATION.pdf and 1.3.1\_Water Related Emergency Situations Response Plan.pdf.

Finding No: TNR-006089

Checklist Item No: 1.3.4

Status: In Progress - CA plan approved

Finding level: Minor

Due date: 2024-Sep-24

Checklist item: Water quality of the site's water source(s), provided waters, effluent and

receiving water bodies shall be quantified. Where there is a

water-related challenge that would be a threat to good water quality status for people or environment, an indication of annual, and where appropriate, seasonal, high and low variances shall be quantified.

Findings: 1.3.4. Water analysis trends.xlsx. The "Graph" worksheet reflects

potable water quality and associated trends against legal requirements for pH, Chlorides, conductivity, and hardness from January 2022 to April 2023, but not for all the relevant parameters (e.g., Nitrates, Nitrites, Ammonia). However, the waste water quality data does not include any comparison with relevant legal requirements, standards and/or

guidelines (currently no legal requirements exist for waste water quality in Mozambique), nor annual and seasonal high and low variances.

Also, no data has been quantified for receiving water bodies (i.e., the shallow aquifer that the site's storm water and grey water from soak-aways percolates into, and indirect Maputo Bay via the ETAR

WWTP for the site's effluent from their septic tanks).

Corrective action: "1. Develop and implement a wastewater/water quality standard and

monitoring schedule for the site based on available legal requirements

and international or regional standards.

2. Develop and implement a system to quantify and track site's water

discharges to receiving water bodies."



### **Alliance for Water Stewardship (AWS)**

Audit Number: AO-000739

Finding No: TNR-006093

Checklist Item No: 1.5.1 Status: Open

Finding level: Observation

Due date: 2024-Sep-24

Checklist item: Water governance initiatives shall be identified, including catchment

plan(s), water-related public policies, major publicly-led initiatives under way, and relevant goals to help inform site of possible opportunities for

water stewardship collective action.

Findings: All licenses to private entities for boreholes include limits, which

ARA-SUL is proposing to begin monitoring. However, this hasn't been

reflected in the sites evidence yet.

This will be included on the set of evidences of the site.

Finding No: TNR-006095

Checklist Item No: 1.5.3 Status: Open

Finding level: Observation

Due date: 2024-Sep-24

Checklist item: The catchment water-balance, and where applicable, scarcity, shall be

quantified, including indication of annual, and where appropriate,

seasonal, variance.

Findings: The site should update this information once new data becomes

available, as the data in the 2015 study is now almost 10 years old.

# WSAS WATER STEWARDSHIP ASSURANCE SERVICES

### **Alliance for Water Stewardship (AWS)**

Audit Number: AO-000739

Finding No: TNR-006096

Checklist Item No: 1.5.4

Status: In Progress - CA plan approved

Finding level: Minor

Due date: 2024-Sep-24

Checklist item: Water quality, including physical, chemical, and biological status, of the

catchment shall be identified, and where possible, quantified. Where there is a water-related challenge that would be a threat to good water quality status for people or environment, an indication of annual, and where appropriate, seasonal, high and low variances shall be identified.

Findings: Information on the biological status of the catchment was limited. An

indication of annual and seasonal high and low variances were also not

identified.

Substantial opportunity exists to expand the site's understanding of the

catchment in terms of both ground and surface water quality.

Corrective action: Conduct structured research and focused consultations on

biological/chemical/physical status of the catchment and the associated

seasonal variances

Evidence of implementation: "Develop and implement a structured research on the catchment status

through case studies, surveys, observational, experimental, and

participant observation.

Participate in catchment water related events and or platforms to gather

data on the catchment

Partner with and consult with mandate holders and or water NGOs to

gather and or obtain information

Support and or conduct research on water related areas of concern or

opportunity."

Finding No: TNR-006384

Checklist Item No: 1.5.5 Status: Open

Finding level: Observation

Due date: 2024-Sep-24

Checklist item: Important Water-Related Areas shall be identified, and where

appropriate, mapped, and their status assessed including any threats to people or the natural environment, using scientific information and

through stakeholder engagement.

Findings: Opportunity exists to map and document the fully spectrum of

catchment IWRAs more comprehensively (e.g., Parque Nacional de Maputo was not included). The site has also not referenced the source

and date of the information documented.



### **Alliance for Water Stewardship (AWS)**

Audit Number: AO-000739

Finding No: TNR-006385

Checklist Item No: 1.5.7 Status: Open

Finding level: Observation

Due date: 2024-Sep-24

Checklist item: The adequacy of available WASH services within the catchment shall be

identified.

Findings: The site has not referenced the source and date of the information

documented.

Finding No: TNR-006102

Checklist Item No: 1.7.2

Status: In Progress - CA plan approved

Finding level: Minor

Due date: 2024-Sep-24

Checklist item: Water-related opportunities shall be identified, including how the site

may participate, assessment and prioritization of potential savings, and

business opportunities.

Findings: The site's Water Related Opportunities Register includes a qualitative

assessment of potential savings, but this was not prioritised nor integrated into the site's assessment of the Opportunity Factor

(Probability x Beneficial Value).

Corrective action: "Revise the current tool to include the prioritazation and assessment

oportunities with the inclusion of potential savings.

Re do the assessment of potential oportunities using the revised tool."

Evidence of implementation: Add a column within the current tool for the assessment and

prioritization of potential savings of identified opportunities.

Finding No: TNR-006112

Checklist Item No: 1.8.1 Status: Open

Finding level: Observation

Due date: 2024-Sep-24

Checklist item: Relevant catchment best practice for water governance shall be

identified.

Findings: 1.8 BAT MOZ BEST PRACTICES.pdf reflects best practices, but some

constitute only good practice.



### **Alliance for Water Stewardship (AWS)**

Audit Number: AO-000739

Finding No: TNR-006113

Checklist Item No: 1.8.4 Status: Open

Finding level: Observation

Due date: 2024-Sep-24

Checklist item: Relevant catchment best practice for site maintenance of Important

Water-Related Areas shall be identified.

Findings: 1.8\_BAT MOZ BEST PRACTICES.pdf reflects various best practices.

However, the infrastructure best practice does not relate to IWRAs, but

relates rather to Water Balance and Water Quality.

The site could include their proposed catchment mangrove restoration

support under this indicator in the future.

Finding No: TNR-006151

Checklist Item No: 2.2.1

Status: In Progress - CA plan approved

Finding level: Minor

Due date: 2024-Sep-24

Checklist item: The system to maintain compliance obligations for water and

wastewater management shall be identified, including:
- Identification of responsible persons/positions within facility

organizational structure

- Process for submissions to regulatory agencies.

Findings: The site currently does not fully reflect the conditions of its

Environmental and Water Licenses in its legal Register, nor full

compliance tracking in relation to these conditions.

Corrective action: Include the permit conditions in the legal register and asses compliance

as per schedule stipulated in the legal compliance procedure.



### **Alliance for Water Stewardship (AWS)**

Audit Number: AO-000739

Finding No: TNR-007101

Checklist Item No: 2.3.2

Status: In Progress - CA plan approved

Finding level: Minor

Due date: 2024-Sep-24

Checklist item: A water stewardship plan shall be identified, including for each target:

- How it will be measured and monitored

- Actions to achieve and maintain (or exceed) it

Planned timeframes to achieve itFinancial budgets allocated for actions

- Positions of persons responsible for actions and achieving targets

- Where available, note the link between each target and the

achievement of best practice to help address shared water challenges

and the AWS outcomes.

Findings: -Financial budgets allocated for all actions: some of them have "none",

for example: row 19: Conduct a campaign on good WASH practices,

this action involves time and trainers which means money.

-There are not targets linked with the outcome: Important Water Related

Areas.

-Best Practice links are reflected per AWS Outcomes, but not the individual best practices identified by the site per Outcome. The site also needs to ensure that the WSP only reflects linkages between proposed target/actions and best practices, where the proposed target/actions and

best practices do actually constitute best practice.

-The site should consider whether its current tree planting on-site (primarily fruit trees) is resulting in any water-related benefits. It also

does not constitute best practice.

-The site could include their proposed catchment mangrove restoration

support in the WSP in the future.

Corrective action: Train and develop all site lead implementers in the establishment of a

Water Stewardship Plan.

Enroll all lead implementers in a water stewardship course to improve

their capacity and understanding of the requirements.

Review the WSP and align the plan as per requirements.

Benchmark with other BAT certified plants.



### **Alliance for Water Stewardship (AWS)**

Audit Number: AO-000739

Finding No: TNR-006121

Checklist Item No: 2.4.1 Status: Open

Finding level: Observation

Due date: 2024-Sep-24

Checklist item: A plan to mitigate or adapt to identified water risks developed in

co-ordination with relevant public-sector and infrastructure agencies

shall be identified.

Findings: The site should engage with a wider range of government institutions on

the full suite of risks identified by the site (e.g., INAAS and INGD for

disaster management such as flooding).

Finding No: TNR-006122

Checklist Item No: 3.1.1
Status: Open

Finding level: Observation

Due date: 2024-Sep-24

Checklist item: Evidence that the site has supported good catchment governance shall

be identified.

Findings: There are some actions that the site has undertaken, as reflected in the

WSP, that are not reflected in 3.1.1 Good Water Governance.pdf yet.

Finding No: TNR-006129

Checklist Item No: 3.4.2

Status: In Progress - CA plan approved

Finding level: Minor

Due date: 2024-Sep-24

Checklist item: Where water quality is a shared water challenge, continual improvement

to achieve best practice for the site's effluent shall be identified and

where applicable, quantified.

Findings: The site identified the need to compare its water quality results to the

domestic limits defined on regulation 18 of 2004 and with South African standard (water quality guidelines), Zimbabwe, or Zambia standards. However, the site has not implemented any of this yet. The site is still to determine if it can improve its effluent quality and if so, how it should do so. Consequently, none of its water quality related actions to date for the site's effluent constitute continual improvement or efforts towards

best practice.

Corrective action: Benchmark regional and international waste water quality to develop an

internal wastewater/water quality standard beyond current legal requirements and implement a quarterly external laboratory analysis of the wastewater/water quality/ by partnering with capable and accredited

laboratories and establish trends based on the monitoring results.

# WSAS WATER STEWARDSHIP ASSURANCE SERVICES

### **Alliance for Water Stewardship (AWS)**

Audit Number: AO-000739

Finding No: TNR-007105

Checklist Item No: 3.5.1

Status: In Progress - CA plan approved

Finding level: Minor

Due date: 2024-Sep-24

Checklist item: Practices set in the water stewardship plan to maintain and/or enhance

the site's Important Water-Related Areas shall be implemented.

Findings: None of these activities are linked with the outcome: Important Water

Related Areas in the Water Stewardship Plan. Refer to finding for indicator 2.3.2. The site is required to implement activities which

maintain or improve IWRAs.

Corrective action: Review the current Water Stewardship Plan to link best practice actions

to actions stipulated in the plan

"Conduct thorough stakeholder engagements and IWRA visits to identify

opportunities to improve existing IWRAs.

Review/revise the WSP and or establish and implement actions that are

linked to opportunities identified, best practices and the AWS

outcomes."

Finding No: TNR-006130

Checklist Item No: 3.9.1
Status: Open

Finding level: Observation

Due date: 2024-Sep-24

Checklist item: Actions towards achieving best practice, related to water governance, as

applicable, shall be implemented.

Findings: Importantly, the site needs to ensure that the WSP only reflects linkages

between proposed target/actions and best practices, where the proposed target/actions and best practices do actually constitute best

practice.

Finding No: TNR-006131

Checklist Item No: 3.9.3 Status: Open

Finding level: Observation

Due date: 2024-Sep-24

Checklist item: Actions towards achieving best practice, related to targets in terms of

water quality shall be implemented.

Findings: The current tree planting on-site (primarily fruit trees) is not resulting in

any water quality-related benefits. It also does not constitute best practice. However, the proposed mangrove restoration support in the catchment (as explained by the site) would constitute best practice and

result in water quality improvements.



### **Alliance for Water Stewardship (AWS)**

Audit Number: AO-000739

Finding No: TNR-006132

Checklist Item No: 3.9.4 Status: Open

Finding level: Observation

Due date: 2024-Sep-24

Checklist item: Actions towards achieving best practice, related to targets in terms of

the site's maintenance of Important Water-Related Areas shall be

implemented.

Findings: In addition to the site's monitoring of the water quality of the deep

aquifer, the site could consider sampling the water quality of the shallow aquifer that would likely be affected if a major contamination event was

to occur on site that resulted in percolation into the soil.

The site could include their proposed catchment mangrove restoration

support under this indicator in the future.

Finding No: TNR-006144

Checklist Item No: 4.3.1 Status: Open

Finding level: Observation

Due date: 2024-Sep-24

Checklist item: Consultation efforts with stakeholders on the site's water stewardship

performance shall be identified.

Findings: The site should repeat this process after completion of their WSP

implementation evaluation after a full year of implementation.

Finding No: TNR-006145

Checklist Item No: 4.4.1

Status: In Progress - CA plan approved

Finding level: Minor

Due date: 2024-Sep-23

Checklist item: The site's water stewardship plan shall be modified and adapted to

incorporate any relevant information and lessons learned from the evaluations in this step and these changes shall be identified.

Findings: The site has not reached a full year of implementation of its WSP yet.

Modification and adaptation of the WSP will be required after completion of a full year of implementation. New information and lessons learned

from the evaluation need to be fully considered at that time.

Corrective action: Train and develop all implementers on the development and

implementation of the Water Stewardship Plan



### **Alliance for Water Stewardship (AWS)**

Audit Number: AO-000739

Finding No: TNR-006146

Checklist Item No: 5.2.1

Status: In Progress - CA plan approved

Finding level: Minor

Due date: 2024-Sep-24

Checklist item: The water stewardship plan, including how the water stewardship plan

contributes to AWS Standard outcomes, shall be communicated to

relevant stakeholders.

Findings: In its disclosure to stakeholders (AWS certification disclosure.jpg and

AWS certification disclosure.msg), the site did not state how its WSP

contributes to all the AWS Standard outcomes.

In a revised version of its WSP (5.2.1\_ Water Stewardship

Outcome.xlsx), the site has now stated how its WSP contributes to all

the AWS Standard outcomes. However, this has not been

communicated to relevant stakeholders yet.

Corrective action: Train and develop all implementers on the development, implementation

and communication of the Water Stewardship Plan



### **Alliance for Water Stewardship (AWS)**

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Value
Warrick Stewart
Monserrath Zamora
1 November 2023

#### Surveillance

#### Proposed date for next audit

2024-Sep-24

Comment

This was an Initial Certification Audit. The first surveillance audit should ideally be scheduled on or before 24 September 2024.

#### **Stakeholder Announcements**

Date of public	cation	Location
25/07/2023		Noticias national newspaper
17/07/2023		https://watersas.org/wp-content/uploa ds/2023/07/AWS-000561-Stakeholder -Announcement-BAT-Mozambique.pd f
		https://a4ws.org/wp-content/uploads/2 023/07/AWS-000561-Stakeholder-An nouncement-BAT-Mozambique.pdf
Comment	The site published its audit announcement 2023.	t in the Noticias national newspaper on 25 July



### **Alliance for Water Stewardship (AWS)**

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#### **Catchment Information**

#### **Catchment Information**

The site is located in the Umbeluzi catchment that hosts part of the Great Maputo Aquifer system. The catchment also contributes to the recharging of the aquifers in the southern area of Mozambique, including the Grande Maputo Aquifer in which BAT Mozambique is located and obtains its water from.

The Umbeluzi River is a major source of water supply in the Umbeluzi catchment and also the Maputo metropolitan area. It also provides water to the Pequenos Libombos dam. Key water-related risks in the catchment include water contamination from anthropogenic activities, flooding, siltation, and over abstraction.

Groundwater in the Maputo district is mostly sourced from Quaternary sand dune systems with shallow phreatic aquifers. Sanitation in these peripheral populated areas often relies on in-situ pit latrines and septic tanks (Muchimbane, 2010).

Due to complex geology and the heterogeneous nature of local lithology, the hydraulic properties of the aquifer vary significantly. Transmissivity values for the eastern part fluctuate between 200-400 m2/day, maximum values observed up to 1,600 m2/day in wells where coarser sands are found.

Current practices make groundwater in Quaternary sand sediments vulnerable to pollution. Efforts to ensure a safe groundwater supply have concentrated in the deepening of boreholes as, variable thickness, clay-layers protect deeper semiconfined aquifers. However, the proximity to low coastal areas, raises the concern of seawater intrusion and even in inland portions of the semi-confined aquifer, groundwater shows high salinities that could locally be related to mixing with trapped seawater (Nogueira et al., 2019). The local government through the Southern Regional Water Authority (ARA-Sul) has invested in groundwater characterization programs and installed a network of monitoring bores that aims to improve management of groundwater resources (Hydroconseil and WE Consult, 2011). However, little quality-assured information is available to understand the origin, interactions and vulnerabilities of these key groundwater resources. A water quality study around the peri-urban areas of Maputo indicated that faecal contamination was not widespread due to the low infiltration rates and because the thick unsaturated layer (10 to 30 meters) safequarded groundwater quality.

No surface water quality information for the catchment was identified by the site.





1.1.1 Site Physical Scope.jpg

#### WSAS



### **Alliance for Water Stewardship (AWS)**

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#### **Client Description and Site Details**

#### Client/Site Background

The BAT Mozambique site is situated in the capital city, Maputo along the Avenida de Angola Road. The site is surrounded by several factories lined up across the 5 km of land and nearby residential areas. The site was established in 2000 and is 15,600 sqm is size. The site produces cigarettes with input materials sourced locally, regionally, and nationally, based on market demand.

The site owns and operates various forms of water related infrastructure on its site which ranges from on-site borehole, abstracted water storage tanks, water pumps, and intricate network of conveyance pipes which transport water to and from various water use and discharge points. The water is used in various points including cleaning and sanitizing, canteen and kitchen, tree watering, cooling systems and fire system. The ultimate water source is the Grande Maputo Aquifer. The drinking water consumed on site is supplied by a third-party, Agua de Eden, which obtains its water from within the catchment.



Site Boundaries.jpg



### **Alliance for Water Stewardship (AWS)**

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#### **Summary of Shared Water Challenges**

#### **Summary of Shared Water Challenges**

The following Shared Water Challenges were identified by the site in consultation with stakeholders:

- Monitoring water quality: there is a concern amongst stakeholders that there is a lack of laboratories for water quality tests. They also believe that the community and/or private water suppliers should be sensitised to water quality assessments.
- Water supply network: stakeholders stated that to reduce water scarcity there is a need to invest in water related infrastructures (dams and water supply network), and increase water retention capacity.
- Enforcement of existing laws: many stakeholders feel that existing laws and regulations related to water are not being adequately enforced.
- Water contamination: stakeholders expressed concern that there should be on-site water treatment works for companies operating next to rivers.
- Inactive authorities: many stakeholders feel regulators and private companies should become more proactive and sensitise and educate the community on water related issues and the regulations in place.
- High density: it was highlighted that Ka Nlhamankulo Compound has a poor drainage system and experiences flooding during the rainy season. The concentration of pit latrines in the area contributes to outbreaks of waterborne disease during flood events.
- Over abstraction of groundwater: stakeholders expressed concern about monitoring of water users who may be abstracting water from the aquifer beyond sustainable limits.
- Low awareness and education: many stakeholders believe that low levels of awareness and education on water issues amongst the public affects their ability to understand rights and responsibilities and engage with government and private sector stakeholders.
- Limited understanding of groundwater: it was suggested that more studies should be conducted to determine the characteristics of the aquifer in the area and the approximate quantity and quality of water in the aquifer.
- Agricultural water pollution: there is concern that runoff from industrial operations close to the river is having a negative impact on water quality.



# Alliance for Water Stewardship (AWS)

Audit Number: AO-000739

0.1	General Requirements for Single Sites, Multi-Sites and Groups	
0.1.1	Eligibility Criteria	
0.1.1.1	The site(s) occupy one catchment OR an exception has been granted.	<b>⊘</b> Yes
Comment	The site occupies one catchment.	
0.1.1.2	The scope of the proposed certification shall be under the control of a single management system.	<b>⊘</b> Yes
Comment	The site is under the control of a single management system.	
0.1.1.3	The scope of the proposed certification shall be homogeneous with respect to primary production system, water management, product or service range, and the main market structures.	<b>⊘</b> Yes
Comment	The site is homogeneous with respect to its primary production system, water management, product or service range, and the main market structures.	,



### **Alliance for Water Stewardship (AWS)**

Audit Number: AO-000739

#### STEP 1: GATHER AND UNDERSTAND

1.1 Gather information to define the site's physical scope for water stewardship purposes, including: its operational boundaries; the water sources from which the site draws; the locations to which the site returns its discharges; and the catchment(s) that the site affect(s) and upon which it is reliant.

**1.1.1** The physical scope of the site shall be mapped, considering the regulatory landscape and zone of stakeholder interests, including:



- Site boundaries;
- Water-related infrastructure, including piping network, owned or managed by the site or its parent organization:
- Any water sources providing water to the site that are owned or managed by the site or its parent organization;
- Water service provider (if applicable) and its ultimate water source;
- Discharge points and waste water service provider (if applicable) and ultimate receiving water body or bodies;
- Catchment(s) that the site affect(s) and is reliant upon for water.

#### Comment

#### Evidence:

1.1.1 SITE PHYSICAL SCOPE.pdf

1.1.1 Site process water piping network.pdf

#### Comments

1.1.1\_SITE PHYSICAL SCOPE v14032023.pdf includes maps of the site boundaries; a map and description of water-related infrastructure; the site's borehole that is its sole water source; the site's process water storage; the site's septic tanks that are cleared at least annually and the associated sludge taken to the ETAR WWTW for treatment and ultimate discharge into the Maputo Bay; the site's stormwater storage tanks from which the water percolates into the aquifer; the Grande Maputo Aquifer (although this map does not accurately reflect the location of the site in relation to this aquifer); and the Umbeluzi catchment.

1.1.1 Site process water piping network.pdf reflects the site's piping network diagrammatically.

The site needs to correct its map of the ETAR WWTW discharge point into the Maputo Bay.

Finding No: TNR-006474

- 1.2 Understand relevant stakeholders, their water related challenges, and the site's ability to influence beyond its boundaries.
- **1.2.1** Stakeholders and their water-related challenges shall be identified. The process used for stakeholder identification shall be identified. This process shall:

Q Obs.

- Inclusively cover all relevant stakeholder groups including vulnerable, women, minority, and Indigenous people;
- Consider the physical scope identified, including stakeholders, representative of the site's ultimate water source and ultimate receiving water body or bodies;
- Provide evidence of stakeholder consultation on water-related interests and challenges;
- Note that the ability and/or willingness of stakeholders to participate may vary across the relevant stakeholder groups;
- Identify the degree of stakeholder engagement based on their level of interest and influence.

#### WSAS



### **Alliance for Water Stewardship (AWS)**

Audit Number: AO-000739

#### Comment Evidence:

1.2\_UNDERSTAND RELEVANT STAKEHOLDERS.pdf 1.2.1.2\_Stakeholder Engagements and Communications.zip

1.2.1.2 Stakeholders Mapping 20230927.xlsx

1.2.1.4 BAT Moz Stakeholder consultive workshop report.pdf

#### Comments:

1.2\_UNDERSTAND RELEVANT STAKEHOLDERS.pdf documents the process the site applied in identifying and then mapping stakeholders, including their water-related challenges, interest/s and influence/s.

1.2.1.2 Stakeholders Mapping.xlsx reflects the stakeholders the site identified, including their water-related challenges, interest/s and influence/s. This document also reflects the priority of each stakeholder, the type of engagement proposed for each, and shared water-related challenges. The document reflects generally good consideration of stakeholders associated with the physical scope of the site, the site's ultimate water source and ultimate receiving water body or bodies, and its catchment. The Unidade 22 Primary school was identified as a community stakeholder. The "compound/neighbourhood" representative (Marta Alfredo Nhancumbe and Idalina Matuca) was identified and consulted, as the formally mandated representative of local residents. Farmers were also identified and consulted. The site's drinking water supplier is a community NGO.

1.2.1.4\_BAT\_Moz\_Stakeholder\_consultive\_workshop\_report.pdf reflects the key outcomes of the stakeholder meeting convened by BAT Mozambique on 5 September 2023 to: introduce local stakeholders to the AWS standard, provide an overview of the site and project to implement the AWS Standard, identify priority water challenges and opportunities to address them, present the site's water stewardship plan to the stakeholders, obtain feedback from the stakeholders on the plan, and present the site's water stewardship performance and obtain feedback from the stakeholders on the performance.

1.2.1.2\_Stakeholder Engagements and Communications.zip reflects various correspondence to and with stakeholders on the site's AWS journey and actions to date.

The site should consider whether the protected area agency (Administração Nacional das Áreas de Conservação (ANAC)) for the Parque Nacional de Maputo (Maputo National Park) should be added as a stakeholder due to the site's effluent being treated at the ETAR Waste Water Treatment Works (WWTW), and then ultimately being discharged into Maputo Bay.

1.2.2 Current and potential degree of influence between site and stakeholder shall be identified, within the catchment and considering the site's ultimate water source and ultimate receiving water body for wastewater.



#### Comment

Evidence:

1.2 UNDERSTAND RELEVANT STAKEHOLDERS.pdf

1.2.1.2 Stakeholders Mapping.xlsx

#### Comments:

1.2.1.2 Stakeholders Mapping.xlsx reflects the stakeholders the site identified, including their water-related challenges and the degree of influence between the site and stakeholders.

1.3 Gather water-related data for the site, including: water balance; water quality, Important Water-Related Areas, water governance, WASH; water-related costs, revenues, and shared value creation.

**1.3.1** Existing water-related incident response plans shall be identified.

**Q** Obs.

WSAS



### **Alliance for Water Stewardship (AWS)**

Audit Number: AO-000739

#### Comment Evidence:

1.3.1\_Water Related Emergency Situations Response Plan.pdf 1.3.1\_INCIDENT RESPONSE PLANS IDENTIFICATION.pdf

1.3.1\_BCP Recovery of Manufacturing Process Moz Vf 12062023.pdf

#### Comments:

1.3.1\_INCIDENT RESPONSE PLANS IDENTIFICATION.pdf specifies the various water-related emergency incidents identified by the site, including both internal and external sources (e.g., drought, flooding, borehole water supply disruption and/or contamination etc.).

1.3.1\_Water Related Emergency Situations Response Plan.pdf is a high-level Standard Operating Procedure with proposed mitigation measures and responsible parties for each of the potential incidents identified in 1.3.1\_INCIDENT RESPONSE PLANS IDENTIFICATION.pdf

1.3.1\_BCP Recovery of Manufacturing Process Moz Vf 12062023.pdf is the site's BCP for recovery of manufacturing processes, which includes all the water-related emergencies that could directly affect the site. However, opportunity exists to expand this BCP to comprehensively cover all the potential water-related emergency incidents identified in 1.3.1\_INCIDENT RESPONSE PLANS IDENTIFICATION.pdf and 1.3.1\_Water Related Emergency Situations Response Plan.pdf.

**1.3.2** Site water balance, including inflows, losses, storage, and outflows shall be identified and mapped



#### Comment

#### Evidence:

1.3.2\_WATER BALANCE FLOW DIAGRAM AND RELATED INFRASTRUCTURE.pdf 1.3.2\_SITE WATER BALANCE SHEET UPDATED.xlsx

#### Comments:

1.3.2\_WATER BALANCE FLOW DIAGRAM AND RELATED INFRASTRUCTURE.pdf includes a schematic and diagrams of the site's inflows, storage, production use, and outflows, including effluent and storm water.

1.3.2\_SITE WATER BALANCE SHEET UPDATED.xlsx reflects the quantitative water use by the site in terms of inflows, storage, production use, and outflows.

1.3.3 Site water balance, inflows, losses, storage, and outflows, including indication of annual variance in water usage rates, shall be quantified. Where there is a water-related challenge that would be a threat to good water balance for people or environment, an indication of annual high and low variances shall be quantified.



#### Comment

#### Evidence:

1.3.3\_SITE WATER BALANCE SHEET UPDATED.xlsx

#### Comments:

1.3.2\_WATER BALANCE FLOW DIAGRAM AND RELATED INFRASTRUCTURE.pdf includes a schematic and diagrams of the site's inflows, storage, production use, and outflows, including effluent and storm water.

1.3.2\_SITE WATER BALANCE SHEET UPDATED.xlsx reflects the quantitate water use by the site in terms of inflows, storage, production use, and outflows.

The anomaly in August 2020 was due to an underground pipe leak between the borehole pump and the underground storage tank, and an overflow leak in the tank, that was still in use then. A number of pipes in walls were leaking too, which the site all addressed in that month. Metering was also installed immediately after that to enable more effective tracking of water use and identification of any losses.

#### WSAS



### **Alliance for Water Stewardship (AWS)**

Audit Number: AO-000739

**1.3.4** Water quality of the site's water source(s), provided waters, effluent and

receiving water bodies shall be quantified. Where there is a water-related challenge that would be a threat to good water quality

in progress

status for people or environment, an indication of annual, and where appropriate, seasonal, high and low variances shall be quantified.

Comment Evidence

1.3.4\_WATER QUALITY TESTING RESULTS.zip

1.3.4 SITE WATER QUALITY.pdf

#### Comments:

1.3.4\_SITE WATER QUALITY.pdf describes the site's water quality monitoring plan, including the current and proposed sampling undertaken of incoming (borehole and bottled drinking water) and discharged water (wastewater and utilities water).

1.3.4\_WATER QUALITY TESTING RESULTS.zip includes various files containing water quality data for potable water, process water, and waste water.

1.3.4. Water analysis trends.xlsx. The "Graph" worksheet reflects potable water quality and associated trends against legal requirements for pH, Chlorides, conductivity, and hardness from January 2022 to April 2023, but not for all the relevant parameters (e.g., Nitrates, Nitrites, Ammonia). However, the waste water quality data does not include any comparison with relevant legal requirements, standards and/or guidelines (currently no legal requirements exist for waste water quality in Mozambique), nor annual and seasonal high and low variances.

Also, no data has been quantified for receiving water bodies (i.e., the shallow aquifer that the site's storm water and grey water from soak-aways percolates into, and indirect Maputo Bay via the ETAR WWTP for the site's effluent from their septic tanks).

Finding No: TNR-006089

**1.3.5** Potential sources of pollution shall be identified and if applicable, mapped, including chemicals used or stored on site.



Comment Evidence:

1.3.5\_INVENTORY\_OF\_POLLUTION\_SOURCES.xlsx

1.3.5 LIST OF CHEMICALS.xlsx

1.3.5\_POLLUTION\_SOURCES\_MAP.pptx

Comments:

1.3.5 POLLUTION\_SOURCES\_MAP.pptx includes a map of the pollution sources on site.

1.3.5\_INVENTORY\_OF\_POLLUTION\_SOURCES.xlsx listed the pollution sources are mapped in 1.3.5\_POLLUTION\_SOURCES\_MAP.pptx.

1.3.5 LIST OF CHEMICALS.xlsx is a list of all chemicals on site.

1.3.6 On-site Important Water-Related Areas shall be identified and mapped, including a description of their status including Indigenous cultural



values.

Comment

Evidence: 1.3.6 ONSITE IWRAs.pdf

Comments.

1.3.6\_ONSITE\_IWRAs.pdf reflects that there are no natural IWRAs present on the site and identified a suite of artificial on-site important water-related infrastructure.

1.3.7 Annual water-related costs, revenues, and a description or quantification of the social, cultural, environmental, or economic water-related value generated by the site shall be identified and used to



inform the evaluation of the plan in 4.1.2.

WSAS



### **Alliance for Water Stewardship (AWS)**

Audit Number: AO-000739

#### Comment Evidence:

1.3.7 Payments and Invoices Control - Eden 2022.xlsx

1.3.7 Water Related Costs.pdf

#### Comments:

1.3.7\_Water\_Related\_Costs.pdf reflects the site's water-related costs in 2021, 2022, and 2023 until end August, and that it does not have any water-related revenues as sales are not directly linked to water. The site did not generate any water-related revenues in the period under review. Water-related values generated are described for economic, social and environmental aspects.

1.3.7\_Payments\_and\_Invoices\_Control\_-\_Eden\_2022.xlsx reflects the water-related costs incurred during 2022.

**1.3.8** Levels of access and adequacy of WASH at the site shall be identified.



#### Comment

#### Evidence:

1.3.8\_Wash Moz.pptx

1.3.8 Ponto de uso de agua.xlsx1.3.8 LEVELS OF WASH.pdf

BAT Dispenser Map, Toilet Map, Toilet pictures.

#### Comments:

1.3.8\_LEVELS OF WASH.pdf describes the site's WASH facilities with regard to drinking water, bathrooms, toilets and urinals, hand wash basins, sanitizer stations, facilities for disabled individuals, canteen facilities, maintenance routines, and WASH communication and awareness. This includes total numbers of such facilities and the ratios of these facilities for men and women, where relevant, but does not specify the number of facilities in each building.

- 1.3.8\_Ponto de uso de agua.xlsx lists the site's WASH facilities and the number of facilities in each building.
- 1.3.8\_Wash Moz.pptx includes pictures of some of the site's sanitary facilities.

All staff and contractors have access to any WASH facilities on site.

- 1.4 Gather data on the site's indirect water use, including: its primary inputs; the water use embedded in the production of those primary inputs the status of the waters at the origin of the inputs (where they can be identified); and water used in out-sourced water-related services.
- **1.4.1** The embedded water use of primary inputs, including quantity, quality and level of water risk within the site's catchment, shall be identified.



#### Comment

#### Evidence:

1.4.1-2\_Indirect Water Use.xlsx

#### Comments:

1.4.1-2\_Indirect Water Use.xlsx reflects the embedded water in primary raw material inputs sourced from outside the catchment, namely Tobacco grades (threshed tobacco), Plasticizer, and Tow, and the percentage contribution of each to the site's final product (63.9% combined). Included is the Material/Service Water Foot Print in L/kg, the total weight of each input per year, and the total embedded water in each input per year. None of these inputs are sourced from the site's catchment. However, the site nonetheless determined the water quality, water risks and mitigations, an actions related to the risk for each of these three inputs. It reflects the same for packaging materials sourced from outside the catchment. The cardboard boxes in which the final product/s are packaged are reflected. The pallets used for the packing of these boxes are not bought, they are received with the raw tobacco, so are essentially used circularly within the business.

#### WSAS



### **Alliance for Water Stewardship (AWS)**

Audit Number: AO-000739

**1.4.2** The embedded water use of outsourced services shall be identified, and where those services originate within the site's catchment, quantified.

Yes

Comment Evidence:

1.4.1-2 Indirect Water Use.xlsx

Comments:

1.4.1-2\_Indirect Water Use.xlsx reflects the embedded water in the site's primary outsourced services, namely electricity and bottled drinking water. Included is the Material/Service Water Foot Print in L/kWh and L/L, the total volume of each input per year, and the total embedded water in each input per year. The site determined the water quality, water risks and mitigations, and actions related to the risk for each of these outsourced services.

1.5 Gather water-related data for the catchment, including water governance, water balance, water quality, Important Water-Related Areas, infrastructure, and WASH

**1.5.1** Water governance initiatives shall be identified, including catchment plan(s), water-related public policies, major publicly-led initiatives under way, and relevant goals to help inform site of possible opportunities for water stewardship collective action.

Q Obs.

Comment

Evidence:

1.5.1 WATER GOVERNANCE INITIATIVES.pdf

Comments:

1.5.1\_WATER GOVERNANCE INITIATIVES.pdf reflects the key laws, policies and plans related to water availability and resources. It also documents the applicability of each to the site.

The site has requested to become members of the Umbeluzi catchment management committee, but this hasn't been approved yet. Once approved, the site will be able to get access to the management plan for the catchment. Also, all licenses to private entities for boreholes include limits, which ARA-SUL is proposing to begin monitoring. However, this hasn't been reflected in the sites evidence yet.

**1.5.2** Applicable water-related legal and regulatory requirements shall be identified, including legally-defined and/or stakeholder-verified

Yes

Comment Evidence

1.5.2\_WATER RELATED LAWS.pdf

customary water rights.

Comments:

1.5.2\_WATER RELATED LAWS.pdf specifies the key water-related laws and the applicability of each to the site.

**1.5.3** The catchment water-balance, and where applicable, scarcity, shall be quantified, including indication of annual, and where appropriate,

**Q** Obs.

Comment Evidence:

1.5.3\_WATER BALANCE.pdf

seasonal, variance.

Comments

1.5.3\_WATER BALANCE.pdf describes the water balance of the Umbeluzi catchment, and includes quantitative data for the catchment and the adjacent catchments as compiled in 2014 and 2015. This includes a total estimated present water demand for surface water.

The 2014 study includes annual variances between 1981 and 2010, but not more recent data.

The site should update this information once new data becomes available, as the data in the 2015 study is now almost 10 years old.

WSAS



### **Alliance for Water Stewardship (AWS)**

Audit Number: AO-000739

1.5.4 Water quality, including physical, chemical, and biological status, of the

catchment shall be identified, and where possible, quantified. Where there is a water-related challenge that would be a threat to good water quality status for people or environment, an indication of annual, and where appropriate, seasonal, high and low variances shall be identified.

in progress

Comment Evidence:

1.5.4 CATCHMENT WATER QUALITY.pdf

Comments:

1.5.4\_CATCHMENT WATER QUALITY.pdf is a summary of the limited information currently available on the water quality status of groundwater within the Great Maputo Aquifer that is located in the Umbeluzi catchment. Information was provided on surface water quality from a physical and chemical perspective, and to a lesser extent on the biological status.

Information on the biological status of the catchment was limited. An indication of annual and seasonal high and low variances were also not identified.

Substantial opportunity exists to expand the site's understanding of the catchment in terms of both ground and surface water quality.

Finding No: TNR-006096

1.5.5 Important Water-Related Areas shall be identified, and where

appropriate, mapped, and their status assessed including any threats to people or the natural environment, using scientific information and through stakeholder engagement.

**Q** Obs.

Comment Evidence:

1.5.5 CATCMENT IWRA.pdf

Comments:

1.5.5 CATCMENT IWRA.pdf includes a map and list with descriptions of a suite of IWRAs in the catchment, including their status/condition, justification for inclusion, how the site affects the IWRA, and water-related risks.

Opportunity exists to map and document the fully spectrum of catchment IWRAs more comprehensively (e.g., Parque Nacional de Maputo was not included). The site has also not referenced the source and date of the information documented.

**1.5.6** Existing and planned water-related infrastructure shall be identified,

including condition and potential exposure to extreme events.



Comment Evidence:

1.5.6 CATCMENT INFRASTRUCTURE.pdf

Comments:

1.5.6 CATCMENT INFRASTRUCTURE.pdf lists the current water-related infrastructure in the catchment, including the condition and potential exposure to extreme events of each. Also reflected is proposed/future water-related infrastructure.

1.5.7 The adequacy of available WASH services within the catchment shall

be identified.

**Q** Obs.

Comment Evidence:

1.5.7\_WASH SERVICES.pdf

Comments:

1.5.7\_WASH SERVICES.pdf describes the status of WASH services in Mozambique and the Umbeluzi catchment.

The site has not referenced the source and date of the information documented.

WSAS



### Alliance for Water Stewardship (AWS)

Audit Number: AO-000739

1.6 Understand current and future shared water challenges in the

catchment, by linking the water challenges identified by stakeholders

with the site's water challenges.

1.6.1 Shared water challenges shall be identified and prioritized from the

information gathered.

Yes

Comment Evidence:

1.6.1\_SAHRED WATER CHALLENGES.pdf

Comments:

1.6.1\_SAHRED WATER CHALLENGES.pdf reflects the shared-water challenges identified via

consultation with stakeholders, including the prioritization of each.

1.6.2 Initiatives to address shared water challenges shall be identified.



Comment Evidence:

1.6.2\_INIATIVES TO ADDRESS SHARED WATER CHALLENGES.pdf

Comments:

1.6.2\_INIATIVES TO ADDRESS SHARED WATER CHALLENGES.pdf reflects a suite of initiates to address/potentially address the shared water challenges identified, including Site Initiatives, Catchment Potential Initiative(s), and the Catchment Implementer/Potential

Partner.

1.7 Understand the site's water risks and opportunities: Assess and

prioritize the water risks and opportunities affecting the site based upon the status of the site, existing risk management plans and/or the issues

and future risk trends identified in 1.6.

1.7.1 Water risks faced by the site shall be identified, and prioritized, including

likelihood and severity of impact within a given timeframe, potential

costs and business impact.



Comment Evidence:

1.7.1 Water Risk Assessment.xlsx

1.7.1\_RFS\_Water\_Portfolio\_Export (BAT Mozambique).xlsx

Comments:

1.7.1\_Water Risk Assessment.xlsx lists the water-risks faced by the site, both by internal risks and catchment-related risks. The document includes assessment of the Classification of risk, Business Impact, Likely Cause, Time-frame, Initiatives in place, Likelihood, Consequence,

Risk Rating, Mitigations, Investment Cost, and By Who (Responsible person).

1.7.1\_RFS\_Water\_Portfolio\_Export (BAT Mozambique).xlsx reflects the site's Water Risk

Filter Operational Risk Results per risk category.

**1.7.2** Water-related opportunities shall be identified, including how the site

may participate, assessment and prioritization of potential savings, and

business opportunities.



WSAS



### **Alliance for Water Stewardship (AWS)**

Audit Number: AO-000739

Comment Evidence:

1.7.2 Water Related Opportunities Register.xlsx

Comments:

1.7.2 Water Related Opportunities Register, xlsx lists various opportunities, their Likelihood of Occurrence, Previous Occurrences, Probability Rating, Potential Benefit to Water Stewardship Actions On-site, Potential Benefit to Water Stewardship in the Actions in Catchment, Potential improvement in legal compliance, Potential improvement to Good Water Governance, Improvement to Company Reputation, Potential Cost of Implementation, Benefit Rating, Opportunity Factor

(Prob x Ben), Opportunity Pursuit Plan, Status, and Post-Implementation Success. The document includes both open and closed (completed) opportunities.

The register includes a qualitative assessment of potential savings, but this was not prioritised nor integrated into the site's assessment of the Opportunity Factor (Probability x Beneficial Value).

Finding No: TNR-006102

Understand best practice towards achieving AWS outcomes: 1.8

Determining sectoral best practices having a local/catchment, regional,

or national relevance.

1.8.1 Relevant catchment best practice for water governance shall be

identified.

Q Obs.

Comment Evidence:

1.8 BAT MOZ BEST PRACTICES.pdf

1.8 BAT MOZ BEST PRACTICES.pdf reflects best practices, but some constitute only good practice.

Relevant sector and/or catchment best practice for water balance (either 1.8.2

through water efficiency or less total water use) shall be identified.

0 Yes

Comment Evidence:

1.8 BAT MOZ BEST PRACTICES.pdf

Comments:

1.8 BAT MOZ BEST PRACTICES.pdf reflects various best practices at either a catchment or sectoral level. Some constitute only good practice at a sectoral level, but are best practice within the catchment context.

1.8.3 Relevant sector and/or catchment best practice for water quality shall be identified, including rationale for data source.



Comment Evidence:

1.8 BAT MOZ BEST PRACTICES.pdf

Comments:

1.8 BAT MOZ BEST PRACTICES.pdf reflects various best practices at either a catchment or sectoral level. Some constitute only good practice at a sectoral level, but are best practice

within the catchment context.

Relevant catchment best practice for site maintenance of Important 1.8.4

Water-Related Areas shall be identified.

Q Obs.



### **Alliance for Water Stewardship (AWS)**

Audit Number: AO-000739

Comment Evidence:

1.8 BAT MOZ BEST PRACTICES.pdf

Comments:

1.8 BAT MOZ BEST PRACTICES.pdf reflects various best practices. However, the

infrastructure best practice does not relate to IWRAs, but relates rather to Water Balance and

Water Quality.

The site could include their proposed catchment mangrove restoration support under this

indicator in the future.

1.8.5 Relevant sector and/or catchment best practice for site provision of

equitable and adequate WASH services shall be identified.

Yes

Comment Evidence:

1.8\_BAT MOZ BEST PRACTICES.pdf

Comments

1.8\_BAT MOZ BEST PRACTICES.pdf reflects various best practices at either the sectoral

and/or catchment context.



### **Alliance for Water Stewardship (AWS)**

Audit Number: AO-000739

# 2 STEP 2: COMMIT & PLAN - Commit to be a responsible water steward and develop a Water Stewardship Plan

2.1 Commit to water stewardship by having the senior-most manager in charge of water at the site, or if necessary, a suitable individual within the organization head office, sign and publicly disclose a commitment to water stewardship, the implementation of the AWS Standard and achieving its five outcomes, and the allocation of required resources.

**2.1.1** A signed and publicly disclosed site statement OR organizational document shall be identified. The statement or document shall include the following commitments:



- That the site will implement and disclose progress on water stewardship program(s) to achieve improvements in AWS water stewardship outcomes
- That the site implementation will be aligned to and in support of existing catchment sustainability plans
- That the site's stakeholders will be engaged in an open and transparent way
- That the site will allocate resources to implement the Standard.

#### Comment

#### Evidence:

2.1.1 Commitment.pdf

2.1.1 Commitment - WATER STEWARDSHIP POLICY.pdf

#### Comments:

2.1.1 Commitment - WATER STEWARDSHIP POLICY.pdf is the site's signed water stewardship policy, that includes a vision, mission, objectives that are aligned with the sub-requirements of this indicator. The commitment to "Proactive engagement with stakeholders on water-related issues" is fundamentally equivalent to "the site's stakeholders will be engaged in an open and transparent way".

2.1.1\_Commitment is a Portuguese version of the commitment.

It was observed on site that this commitment is available for public viewing in the site entrance guardhouse, that any member of the public can access, and on the outside of the site entrance guard house.

- **2.2** Develop and document a process to achieve and maintain legal and regulatory compliance.
- 2.2.1 The system to maintain compliance obligations for water and wastewater management shall be identified, including:
   Identification of responsible persons/positions within facility organizational structure



- Process for submissions to regulatory agencies.



### **Alliance for Water Stewardship (AWS)**

Audit Number: AO-000739

Comment

Evidence: Legal Register BAT.xlsx

2.2.1 EHS Procedure Tracking of Legislation.pdf

License\_tracker.xlsx Licenca do furo BAT.pdf

Comments:

Legal Register BAT.xlsx lists all the relevant legislation that the site has to comply with.

From a water perspective, there are not any legal requirements directly applicable to the site, but the applicable water-related legislation does specify a number of mandates, principles of operation, and obligations of organs of state although none of this is directly applicable to the site.

2.2.1\_EHS Procedure Tracking of Legislation.pdf reflects the process the site applies to track currently applicable legislation and any proposed, revised, and new legislation. It also states the relevant responsibilities for various legal requirements, including "EHS and Finance - Renewal of licenses and permits". Within the context of this site procedure, there is only one individual in the EHS department, so the line of responsibility is currently clear.

The site has a tracking sheet that they use to understand what legal requirements need submissions for renewal.

Environmental License and Borehole License (Licenca\_do\_furo\_BAT.pdf) are applicable to the site. License\_tracker.xlsx reflects the two applicable water for the site, their issued and expiry dates, and the category of each.

The site currently does not fully reflect the conditions of its Environmental and Water Licenses in its legal Register, nor full compliance tracking in relation to these conditions.

Finding No: TNR-006151

- 2.3 Create a water stewardship strategy and plan including addressing risks (to and from the site), shared catchment water challenges, and opportunities.
- 2.3.1 A water stewardship strategy shall be identified that defines the overarching mission, vision, and goals of the organization towards good water stewardship in line with this AWS Standard.

Ves

Comment

Evidence:

2.3.1 - Water Stewardship Strategy Mozambique.pdf

#### Comments:

2.3.1 - Water Stewardship Strategy Mozambique.pdf defines the overarching mission, vision, and goals of the organization towards good water stewardship in line with this AWS Standard, including specified roles and responsibilities, guiding principles, and outcomes.

**2.3.2** A water stewardship plan shall be identified, including for each target:



- How it will be measured and monitored
- Actions to achieve and maintain (or exceed) it
- Planned timeframes to achieve it
- Financial budgets allocated for actions
- Positions of persons responsible for actions and achieving targets
- Where available, note the link between each target and the achievement of best practice to help address shared water challenges and the AWS outcomes.

WSAS



### **Alliance for Water Stewardship (AWS)**

Audit Number: AO-000739

Comment Evidence:

2.3.2 Water Stewardship Plan.xlsx

#### Comments:

2.3.2\_Water Stewardship Plan.xlsx is the site's 2023 WSP that includes the following categories of information: Focus Area, Target, Measurement and monitoring method, Action, Timeline, Budget Allocation(MZM), Status, Position, Link to best practice, and AWS Outcome.

- -Financial budgets allocated for all actions: some of them have "none", for example: row 19: Conduct a campaign on good WASH practices, this action involves time and may mean internal trainers within the group.
- -There are not targets linked with the outcome: Important Water Related Areas.
- -Best Practice links are reflected per AWS Outcomes, but not the individual best practices identified by the site per Outcome. The site also needs to ensure that the WSP only reflects linkages between proposed target/actions and best practices, where the proposed target/actions and best practices do actually constitute best practice.
- -The site should consider whether its current tree planting on-site (primarily fruit trees) is resulting in any water-related benefits. It also does not constitute best practice.
- -The site could include their proposed catchment mangrove restoration support in the WSP in the future.

Finding No: TNR-007101

2.4 Demonstrate the site's responsiveness and resilience to respond to water risks

2.4.1 A plan to mitigate or adapt to identified water risks developed in co-ordination with relevant public-sector and infrastructure agencies shall be identified.

Q Obs.

Comment Evidence:

Emergency situations.pdf

#### Comments:

Emergency situations.pdf is the site's emergency response plan, including key risks, mitigation measures, and responsible parties for implementation. BAT has an intelligence team, largely in the engineering department but some in EHR, that supported the site in identifying potential risks. The site also engaged with other BAT country teams, the site's neighbours, Cooperativa de Educação Ambiental Repensar (national NGO), and ARA-SUL on potential risks to consider.

The site should engage with a wider range of government institutions on the full suite of risks identified by the site (e.g., INAAS and INGD for disaster management such as flooding).



### **Alliance for Water Stewardship (AWS)**

Audit Number: AO-000739

3	STEP 3: IMPLEMENT - Implement the site's stewardship plan and improve
	impacts

3.1 Implement plan to participate positively in catchment governance.

**3.1.1** Evidence that the site has supported good catchment governance shall be identified.

Q Obs.

Comment Evidence:

EHS Procedure Tracking of Legislation.pdf

BAT\_Moz\_Stakeholder\_consultive\_workshop\_report.pdf

World Environment Day.pdf World clean up day.pdf

3.1.1 Good Water Governance.pdf

#### Comments:

3.1.1 Good Water Governance.pdf reflects the following actions implemented by the site, in addition to the other evidence above (e.g., World Environment Day etc.): cleaning up campaigns in the catchment aimed at cleaning the coastal zone which supports the mandate of the local council and the ministry of land and environment; engaged the institutions involved in water governance; provided training and awareness to institutions involved in water governance on water stewardship (e.g., Supported the identification of water related risks that can be utilized by the ministry or regulatory agencies for planning); and tree planting in the catchment.

However, there are some actions that the site has undertaken, as reflected in the WSP, that are not reflected in 3.1.1 Good Water Governance.pdf yet.

3.1.2 Measures identified to respect the water rights of others including Indigenous peoples, that are not part of 3.2 shall be implemented.



Comment Evidence:

EHS Procedure Tracking of Legislation.pdf

3.1.2\_MEASURES TO RESPECT WATER RIGHTS.pdf

#### Comments:

The site consulted local stakeholders and its internal local legal counsel to determine if any water rights are applicable over and above legal requirements. The following was concluded: The site is in a commercial/urban and peri-urban setting, therefore there are no indigenous peoples present with customary or other rights over and above other citizens. There are also no water rights applicable over and above legal requirements. The site has not identified any other water rights applicable in its water context.

The various good and best practices on site (e.g., to avoid contamination events) address the requirements of the Environment Law (Approved 28/7/97).

3.2 Implement system to comply with water-related legal and regulatory requirements and respect water rights.

**3.2.1** A process to verify full legal and regulatory compliance shall be implemented.



WSAS



### **Alliance for Water Stewardship (AWS)**

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Comment Evidence:

3.2.1 LEGAL COMMPLIANCE PROCESS.pdf

Legal Register BAT.xlsx License tracker.xlsx Licenca do furo BAT.pdf Licenca ambiental.pdf

Relatorio de Auditoria Ambiental.pdf

Comments:

3.2.1\_LEGAL\_COMMPLIANCE\_PROCESS.pdf reflects the process the site follows to achieve and maintain legal compliance.

Licenca do furo BAT.pdf, Licenca ambiental.pdf, Legal Register BAT.xlsx, License tracker.xlsx, and Relatorio de Auditoria Ambiental.pdf (site's Environmental Compliance Audit Report) reflect the legal obligations of the site regarding water, the site's efforts to monitoring legal compliance, and the site's current state of compliance.

There is a process in place and functional specific to EHS, the recommendation is to include an End to End process for all regulatory applicable to the industry.

3.2.2 Where water rights are part of legal and regulatory requirements, measures identified to respect the water rights of others including

measures identified to respect the water rights of others including Indigenous peoples, shall be implemented.



Comment Evide

3.2.2 MEASURES TO RESPECT WATER RIGHTS IN LEGISLATION.pdf

#### Comments:

3.2.2\_MEASURES TO RESPECT WATER RIGHTS IN LEGISLATION.pdf reflects the actions taken by the site to respect the water rights of others, including (amongst other actions):

- Implementation of water reduction initiatives to reduce water withdrawn and allow for the community or other catchment stakeholder to access the water which the site would have used if no reduction was done.
- The water use reduction initiatives have a positive impact on the catchment water balance and consequently on other water users and their water rights.
- The site has sought to avoid contamination of water resources through pollution prevention programs (e.g., chemical, hydrocarbon pollution etc.).
- 3.3 Implement plan to achieve site water balance targets.
- **3.3.1** Status of progress towards meeting water balance targets set in the water stewardship plan shall be identified.



Comment

Evidence:

3.3.1\_WATER\_BALANCE\_TARGETS.pdf

3.3.1\_SITE\_WATER\_BALANCE\_SHEET\_UPDATED.xlsx

2.3.2\_\_Water\_Stewardship\_Plan (1).xlsx

#### Comments:

3.3.1\_WATER\_BALANCE\_TARGETS.pdf reflects the water balance target set for the site for 2023 and the status of current progress (currently on track to achieve at least the 100 m3 reduction target, if not closer to 200 m3.).

3.3.1\_SITE\_WATER\_BALANCE\_SHEET\_UPDATED.xlsx includes quantitative data confirming this.

The status of progress, including completion of certain actions, related to water balance are also reflected in the WSP (2.3.2 \_\_Water\_Stewardship\_Plan (1).xlsx).

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### **Alliance for Water Stewardship (AWS)**

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3.3.2 Where water scarcity is a shared water challenge, annual targets to

improve the site's water use efficiency, or if practical and applicable,

reduce volumetric total use shall be implemented.

Yes

Comment Evidence:

3.3.1 WATER BALANCE TARGETS.pdf

3.3.1 SITE WATER BALANCE SHEET UPDATED.xlsx

2.3.2 Water\_Stewardship\_Plan (1).xlsx

Comments:

Refer to comments for indicator 3.3.1.

3.3.3 Legally-binding documentation, if applicable, for the re-allocation of

water to social, cultural or environmental needs shall be identified.

Yes

Comment Evidence:

3.3.3\_WATER REALLOCATION.pdf

Comments:

3.3.3\_WATER REALLOCATION.pdf confirms that "The site has not reallocated water in the period under review and no water reallocation is being implemented by BAT Mozambique to

social, cultural, or environmental needs."

3.4 Implement plan to achieve site water quality targets

3.4.1 Status of progress towards meeting water quality targets set in the water

stewardship plan shall be identified.

**V**es

Comment Evidence:

3.4.1 WATER QUALITY TARGETS.pdf

Comments:

3.4.1\_WATER\_QUALITY\_TARGETS.pdf reflects the status of progress towards meeting water quality targets set in the water stewardship plan. In addition to this evidence, the site has also installed a tap at the borehole pump, to provide a suitable sampling point.

**3.4.2** Where water quality is a shared water challenge, continual improvement

to achieve best practice for the site's effluent shall be identified and

where applicable, quantified.

in progress

Comment

Evidence:

3.4.2\_WATER\_QUALITY\_TARGETS.pdf Water quality monitoring report.xlsx

Comments:

3.4.2\_WATER\_QUALITY\_TARGETS.pdf and Water\_quality\_monitoring\_report.xlsx reflect that the site has been sampling its effluent to understand its water quality.

The site identified the need to compare its water quality results to the domestic limits defined on regulation 18 of 2004 and with South African standard (water quality guidelines), Zimbabwe, or Zambia standards. However, the site has not implemented any of this yet.

The site is still to determine if it can improve its effluent quality and if so, how it should do so.

Consequently, none of its water quality related actions to date for the site's effluent constitute continual improvement or efforts towards best practice.

Finding No: TNR-006129

3.5 Implement plan to maintain or improve the site's and/or catchment's Important Water-Related Areas.

WSAS



#### Alliance for Water Stewardship (AWS)

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3.5.1 Practices set in the water stewardship plan to maintain and/or enhance

the site's Important Water-Related Areas shall be implemented.

in progress

Comment Evidence:

3.5.1 BAT Moz Stakeholder consultive workshop report.pdf

3.5.1\_ONSITE IWRAs.pdf World clean up day.pdf

Comments:

3.5.1\_BAT Moz Stakeholder consultive workshop report.pdf, 3.5.1\_ONSITE IWRAs.pdf, and World clean up day.pdf reflect that the site does not have any on-site IWRAs but that in September 2022 it hosted a "Let's Team Up to Clean Up" activity in 2022 jointly with the Ministry of Land and Environment, the Municipal Council of the capital city Maputo and the Cooperativa de Educação Ambiental REPENSAR.

None of these activities are linked with the outcome: Important Water Related Areas in the Water Stewardship Plan. Refer to finding for indicator 2.3.2.

Finding No: TNR-007105 Finding No: TNR-007115

3.6 Implement plan to provide access to safe drinking water, effective

sanitation, and protective hygiene (WASH) for all workers at all

premises under the site's control.

3.6.1 Evidence of the site's provision of adequate access to safe drinking

water, effective sanitation, and protective hygiene (WASH) for all workers onsite shall be identified and where applicable, quantified. Yes

Comment Evidence:

Wash Moz.pdf

Ponto de uso de agua.xlsx Cleaning checklist.pdf 3.6.1 LEVELS OF WASH.pdf

#### Comments:

Wash Moz.pdf, Ponto de uso de agua.xlsx, Cleaning checklist.pdf, and 3.6.1\_LEVELS OF WASH.pdf descriptively and quantitative reflect the adequacy and appropriate levels of access to WASH on-site, including daily and as required maintenance of these facilities. This was confirmed on-site, as per the on-site audit photographs uploaded.

3.6.2 Evidence that the site is not impinging on the human right to safe water and sanitation of communities through their operations, and that

and sanitation of communities through their operations, and that traditional access rights for indigenous and local communities are being respected, and that remedial actions are in place where this is not the case, and that these are effective.



Comment

Evidence:

3.6.2\_EVIDENCE OF NOT IMPINGING ON WASH RIGHTS.pdf

#### Comments:

3.6.2\_EVIDENCE OF NOT IMPINGING ON WASH RIGHTS.pdf reflects that their are not any indigenous peoples and/or communities with customary water rights in the catchment. However, the site is implementing a range of groundwater contamination avoid measure, including containment of chemicals and diesel from its generator, as well as monitoring of the deep aquifer (from which the site obtains its input water) and proposed monitoring of the site's

effluent

3.7 Implement plan to maintain or improve indirect water use within the

catchment:

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3.7.1 Evidence that indirect water use targets set in the water stewardship

plan, as applicable, have been met shall be quantified.

Yes

Comment Evidence:

Photos da Visita.zip Email to Carmoc.pdf

3.7.1-2 INDIRECT WATER USE.pdf

3.7.1-2 INDIRECT WATER USE.pdf reflects the status of progress in engagement with 5 of the site's priority suppliers, including obtaining their indirect water use data, as per the actions

identified in the WSP.

3.7.2 Evidence of engagement with suppliers and service providers, as well

> as, when applicable, actions they have taken in the catchment as a result of the site's engagement related to indirect water use, shall be

Yes

identified.

Comment Evidence: Photos da Visita.zip

Email to Carmoc.pdf

3.7.1-2 INDIRECT WATER USE.pdf

Comments:

3.7.1-2 INDIRECT WATER USE.pdf reflects the status of progress in engagement with 5 of the site's priority suppliers, including obtaining their indirect water use data, as per the actions

identified in the WSP.

Engagement with BAT South Africa was undertaken as one of the priorities suppliers, as all packing material inputs are supplied via BAT South Africa except the shipping cases

(Carmoc).

To date the suppliers have responded by sharing their indirect water use data with the site, which has enabled the site to calculate the indirect and/or embedded water use from each of these suppliers.

Implement plan to engage with and notify the owners of any shared 3.8 water-related infrastructure of any concerns the site may have.

3.8.1 Evidence of engagement, and the key messages relayed with confirmation of receipt, shall be identified.



Comment

3.8 Engagement on shared WRI.pdf

Comments:

3.8 Engagement on shared WRI.pdf reflects correspondence with the ETAR WWTW regarding a site visit to the plant, which was undertaken. The correspondence also reflects the

concerns the site raised with the ETAR WWTW plant regarding their operation.

Implement actions to achieve best practice towards AWS outcomes: continually improve towards achieving sectoral best practice having a

local/catchment, regional, or national relevance.

Actions towards achieving best practice, related to water governance, 3.9.1 as applicable, shall be implemented.

Q

Obs.

3.9

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#### Comment Evidence:

3.9 BAT MOZ BEST PRACTICES (IMPLEMENTATION).pdf

3.9 Good practices evidences.pdf

3.9\_Stakeholder Engagements and Communications.zip
3.9\_BAT Moz Stakeholder consultive workshop report.pdf

3.9.3\_WORLD ENVIRONMENT DAY.pptx

3.9.3 WATER QUALITY TESTING RESULTS.zip

3.9.3 Water quality monitoring report.xlsx

3.9.1 Stakeholders Mapping.xlsx

3.9.1 comunication.pdf

#### Comments:

The evidence above, particularly 3.9\_BAT MOZ BEST PRACTICES (IMPLEMENTATION).pdf and 3.9\_Good\_practices\_evidences.pdf, confirms the stakeholder workshop held, the support/collaboration for the Coastal Clean-up and World Environment Day activities, and consultation on water-related challenges and solutions.

Importantly, the site needs to ensure that the WSP only reflects linkages between proposed target/actions and best practices, where the proposed target/actions and best practices do actually constitute best practice.

**3.9.2** Actions towards achieving best practice, related to targets in terms of water balance shall be implemented.



#### Comment

#### Evidence:

3.9 BAT MOZ BEST PRACTICES (IMPLEMENTATION).pdf

3.9 Good practices evidences.pdf

3.9\_Stakeholder Engagements and Communications.zip 3.9\_BAT Moz Stakeholder consultive workshop report.pdf

3.9.3\_WORLD ENVIRONMENT DAY.pptx

3.9.3\_WATER QUALITY TESTING RESULTS.zip

3.9.3 Water quality monitoring report.xlsx

3.9.1 Stakeholders Mapping.xlsx

3.9.1 comunication.pdf

#### Comments:

The evidence above, particularly 3.9\_BAT MOZ BEST PRACTICES (IMPLEMENTATION).pdf and 3.9\_Good\_practices\_evidences.pdf, reflect completion of four of the five proposed best practices, with Water Replenishment opportunities only scheduled for implementation by 2026.

**3.9.3** Actions towards achieving best practice, related to targets in terms of water quality shall be implemented.

**Q** Obs.



#### **Alliance for Water Stewardship (AWS)**

Audit Number: AO-000739

#### Comment Evidence:

3.9 BAT MOZ BEST PRACTICES (IMPLEMENTATION).pdf

3.9 Good practices evidences.pdf

3.9\_Stakeholder Engagements and Communications.zip
3.9\_BAT Moz Stakeholder consultive workshop report.pdf

3.9.3\_WORLD ENVIRONMENT DAY.pptx

3.9.3 WATER QUALITY TESTING RESULTS.zip

3.9.3 Water quality monitoring report.xlsx

3.9.1 Stakeholders Mapping.xlsx

3.9.1 comunication.pdf

#### Comments:

The evidence above, particularly 3.9\_BAT MOZ BEST PRACTICES (IMPLEMENTATION).pdf and 3.9\_Good\_practices\_evidences.pdf, reflect the status of progress to date. The majority of the actions have been implemented, except for tree planting in the catchment that has only been undertaken on-site to date.

The current tree planting on-site (primarily fruit trees) is not resulting in any water quality-related benefits. It also does not constitute best practice. However, the proposed mangrove restoration support in the catchment (as explained by the site) would constitute best practice and result in water quality improvements.

3.9.4 Actions towards achieving best practice, related to targets in terms of

the site's maintenance of Important Water-Related Areas shall be

implemented.

Comment E

Evidence:

3.9 BAT MOZ BEST PRACTICES (IMPLEMENTATION).pdf

3.9 Good practices evidences.pdf

3.9\_Stakeholder Engagements and Communications.zip

3.9 BAT Moz Stakeholder consultive workshop report.pdf

3.9.3\_WORLD ENVIRONMENT DAY.pptx

3.9.3 WATER QUALITY TESTING RESULTS.zip

3.9.3\_Water quality monitoring report.xlsx

3.9.1 Stakeholders Mapping.xlsx

3.9.1 comunication.pdf

#### Comments:

The evidence above, particularly 3.9\_BAT MOZ BEST PRACTICES (IMPLEMENTATION).pdf and 3.9\_Good\_practices\_evidences.pdf, reflect the status of progress to date with all having been implemented to date.

In addition to the site's monitoring of the water quality of the deep aquifer, the site could consider sampling the water quality of the shallow aquifer that would likely be affected if a major contamination event was to occur on site that resulted in percolation into the soil.

The site could include their proposed catchment mangrove restoration support under this indicator in the future.

**3.9.5** Actions towards achieving best practice related to targets in terms of WASH shall be implemented.



Q

Obs.



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Comment Evidence:

3.9 BAT MOZ BEST PRACTICES (IMPLEMENTATION).pdf

3.9 Good practices evidences.pdf

3.9\_Stakeholder Engagements and Communications.zip
3.9\_BAT Moz Stakeholder consultive workshop report.pdf

3.9.3\_WORLD ENVIRONMENT DAY.pptx

3.9.3 WATER QUALITY TESTING RESULTS.zip

3.9.3 Water quality monitoring report.xlsx

3.9.1 Stakeholders Mapping.xlsx

3.9.1 comunication.pdf

#### Comments:

The evidence above, particularly 3.9\_BAT MOZ BEST PRACTICES (IMPLEMENTATION).pdf and 3.9\_Good\_practices\_evidences.pdf, reflect the status of progress to date with all having been implemented and ongoing inspections and maintenance being implemented too.



# **Alliance for Water Stewardship (AWS)**

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4	STEP 4: EVALUATE - Evaluate the site's performance.
4.1	Evaluate the site's performance in light of its actions and targets from its water stewardship plan and demonstrate its contribution to achieving water stewardship outcomes.
4.1.1	Performance against targets in the site's water stewardship plan and the contribution to achieving water stewardship outcomes shall be Yes evaluated.
Comment	Evidence: Water Stewardship Plan evaluation.xlsx 4.1.1_ Water Stewardship Plan Evaluation.xlsx
	Comments: 4.1.1_ Water Stewardship Plan Evaluation.xlsx reflects the site's evaluation of its progress for each target as either "Completed" or "Ongoing", with descriptions of more detailed progress reflected in the Comments field.
4.1.2	Value creation resulting from the water stewardship plan shall be evaluated.
Comment	Evidence: 4.1.2-3_Value Creation and Benefits.pdf
	Comments: 4.1.2-3_Value Creation and Benefits.pdf reflects the economic, social, and environmental value created for the site via implementation of the site's WSP.
	As the site does not pay on a volumetric basis for the water it abstracts, there was no direct financial cost saving achieved via the site's water reduction efforts.
4.1.3	The shared value benefits in the catchment shall be identified and where applicable, quantified.
Comment	Evidence: 4.1.2-3_Value Creation and Benefits.pdf
	Comments: 4.1.2-3_Value Creation and Benefits.pdf reflects the economic, social, and environmental value created for the catchment via implementation of the site's WSP.
4.2	Evaluate the impacts of water-related emergency incidents (including extreme events), if any occurred, and determine the effectiveness of corrective and preventative measures.
4.2.1	A written annual review and (where appropriate) root-cause analysis of the year's emergency incident(s) shall be prepared and the site's Yes response to the incident(s) shall be evaluated and proposed preventative and corrective actions and mitigations against future incidents shall be identified.
Comment	Evidence: 4.2.1_EMERGENCY SITUATIONS COMMENTARY.pdf
	Comments: 4.2.1_EMERGENCY SITUATIONS COMMENTARY.pdf reflects a storm and heavy rain that affected the city of Maputo, the capital of Mozambique, and surrounding areas of Maputo Province in February 2023. The site assessment the significance of the event, its root cause, location, impact on site, and mitigation measures. No other emergency incidents occurred on

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site during the last year.

location, impact on site, and mitigation measures. No other emergency incidents occurred on



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4.3 Evaluate stakeholders' consultation feedback

regarding the site's water stewardship performance, including the

effectiveness of the site's engagement process.

**4.3.1** Consultation efforts with stakeholders on the site's water stewardship

performance shall be identified.

**Q** Obs.

Comment Evidence:

4.3.1\_WSP feedback forms.pdf 4.3.1 Consultaton Efforts.pdf

#### Comments:

4.3.1\_Consultaton Efforts.pdf and 4.3.1\_WSP feedback forms.pdf reflect that stakeholders were presented with the site's water stewardship plan and its year-to-date performance. Stakeholders were later given an opportunity to comment or provide feedback on the site's plan and performance through a structured questionnaire and the associated stakeholder feedback forms.

The site should repeat this process after completion of their WSP implementation evaluation after a full year of implementation.

**4.4** Evaluate and update the site's water

stewardship plan, incorporating the information obtained from the evaluation process in the context of continual improvement.

4.4.1 The site's water stewardship plan shall be modified and adapted to

incorporate any relevant information and lessons learned from the evaluations in this step and these changes shall be identified.

in progress

Comment Evidence

4.4.1\_ Water Stewardship Plan Evaluation.xlsx

#### Comments:

The site has not reached a full year of implementation of its WSP yet. Modification and adaptation of the WSP will be required after completion of a full year of implementation. New information and lessons learned from the evaluation need to be fully considered at that time.

Finding No: TNR-006145 Finding No: TNR-007116



#### **Alliance for Water Stewardship (AWS)**

Audit Number: AO-000739

# 5 STEP 5: COMMUNICATE & DISCLOSE - Communicate about water stewardship and disclose the site's stewardship efforts

5.1 Disclose water-related internal governance of the site's management,

including the positions of those accountable for legal compliance with

water-related local laws and regulations.

**5.1.1** The site's water-related internal governance, including positions of

those accountable for compliance with water-related laws and

regulations shall be disclosed.



AWS certification disclosure.jpg AWS certification disclosure.msg

5 Stakeholder Consultative Meeting Report.pdf

5 Implementation of AWS.pdf

5\_comunication.pdf

5\_Comunication to the stakeholders.pdf

BAT\_Moz\_Stakeholder\_consultive\_workshop\_report 5.1-5\_- Article\_AWS\_-\_Journey\_Implementation

#### Comments

AWS certification disclosure.msg and AWS certification disclosure.jpg reflect the newspaper article that the site published on 28 September 2023 that disclosed the site's AWS journey, the governance structure of the site, and the actions the site has planned and/or implemented to date

5\_Comunication to the stakeholders.pdf reflects that the description of the site's governance structure, including the responsible position for water-related legal compliance, was shared with the site's stakeholders via 5 Implementation of AWS.pdf.

**5.2** Communicate the water stewardship plan with relevant stakeholders.

5.2.1 The water stewardship plan, including how the water stewardship plan

contributes to AWS Standard outcomes, shall be communicated to

relevant stakeholders.

Comment Evidence:

AWS certification disclosure.jpg AWS certification disclosure.msg

#### Comments:

AWS certification disclosure.msg and AWS certification disclosure.jpg reflect the newspaper article that the site published on 28 September 2023 that disclosed the site's AWS journey, the governance structure of the site, and the actions the site has planned and/or implemented to date. In this communication, the site did not state how its WSP contributes to all the AWS Standard outcomes.

In a revised version of its WSP (5.2.1\_ Water Stewardship Outcome.xlsx), the site has now stated how its WSP contributes to all the AWS Standard outcomes. However, this has not been communicated to relevant stakeholders yet.

5.3 Disclose annual site water stewardship summary, including: the relevant

information about the site's annual water stewardship performance and results against the site's targets.

**5.3.1** A summary of the site's water stewardship performance, including quantified performance against targets, shall be disclosed annually at a

minimum.



in progress

Yes

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Finding No: TNR-006146



#### **Alliance for Water Stewardship (AWS)**

Audit Number: AO-000739

Comment Evidence:

AWS certification disclosure.msg AWS certification disclosure.jpg

Comments:

AWS certification disclosure.msg and AWS certification disclosure.jpg reflect the newspaper article that the site published on 28 September 2023 that disclosed a summary of the site's water stewardship performance, including quantified performance against targets.

**5.4** Disclose efforts to collectively address shared water challenges,

including: associated efforts to address the challenges; engagement with

stakeholders; and co-ordination with public-sector agencies.

**5.4.1** The site's shared water-related challenges and efforts made to address

these challenges shall be disclosed.

Yes

Comment Evidence:

1.2.1.2\_Stakeholder Engagements and Communications.pdf

Confirmacao de convite.pdf Solicitacao de visita CJIC.pdf AWS certification disclosure.msg AWS certification disclosure.jpg

Comments:

AWS certification disclosure.msg and AWS certification disclosure.jpg reflect the newspaper article that the site published on 28 September 2023 that disclosed the site's shared water-related challenges and efforts made to address these challenges.

**5.4.2** Efforts made by the site to engage stakeholders and coordinate and support public-sector agencies shall be identified.



Comment Evidence:

1.2.1.2 Stakeholder Engagements and Communications.pdf

Confirmacao de convite.pdf Solicitacao de visita CJIC.pdf AWS certification disclosure.msg AWS certification disclosure.jpg

Comments:

Efforts made by the site to engage stakeholders and coordinate and support public-sector

agencies have been identified.

**5.5** Communicate transparency in water-related compliance: make any site

water-related compliance violations available upon request as well as any corrective actions the site has taken to prevent future occurrences.

**5.5.1** Any site water-related compliance violations and associated corrections

shall be disclosed.





#### **Alliance for Water Stewardship (AWS)**

Audit Number: AO-000739

#### Comment Evidence:

5.5.1 - Violations & assiated corrections disclose.pdf

5.5.1.png

#### Comments:

The site advised that it has not experienced any compliance violation incidents in the last year. It was confirmed by ARA-SUL, FiPAG, and DNAAS, and DNGR that they are not aware of the site having any compliance violations.

The site's borehole groundwater abstraction license is up-to-date. However, the site anticipates that the monthly abstraction limit in the previous permit is likely the same as the current permit (300 m3/month). If that was the case, the site had to very limit exceedances in January and February 2021, but not on average for 2021, but consistent exceedances per month for 2020 except for December.

The site is required to comply with Regulation 18 of 2004 that stipulates for parameters and limits for effluent discharge, with the site subject to domestic limits as it does not fall within any of the industrial categories in the Regulation. The site is testing its effluent (as per Water analysis data.xlsx) for a suite of parameters, but not all as per the Regulation (e.g., COD, TSS, ). Future sampling needs to cover all the parameters specified in the Regulation.

The site was required to implement various mitigation and management actions, as per its Environmental Management Plan, to comply with its Environmental License. The two recent audits the site had undertaken in terms of its license requirements reflected that some waste handling needed to be improved, which the site has implemented, but not disclosed to its stakeholders.

None of these aspects have been deemed as compliance violations by the relevant government regulators.

**5.5.2** Necessary corrective actions taken by the site to prevent future occurrences shall be disclosed if applicable.



#### Comments:

The site has not had any compliance violations that have required corrective actions, but environmental performance improvement opportunities were identified during an audit of the site's EMP, which the site has implemented regarding solid waste.

5.5.3 Any site water-related violation that may pose significant risk and threat to human or ecosystem health shall be immediately communicated to relevant public agencies and disclosed.



#### Comments:

The site advised that it has not experienced any compliance violation incidents in the last year. It was confirmed by ARA-SUL, FiPAG, and DNAAS, and DNGR that they are not aware of the site having any compliance violations. The site has not had any compliance violations that have required corrective actions, but environmental performance improvement opportunities were identified during an audit of the site's EMP, which the site has implemented regarding solid waste.

Consequently, none of these were deemed as posing a significant risk and threat to human or ecosystem health requiring immediately communication to relevant public agencies and disclosure.



### **Alliance for Water Stewardship (AWS)**

Audit Number: AO-000739

#### **Photographic Evidence from Audit**



Ramp inside of site bunded and locked chemical store.jpg



Solid waste separation bins.jpg

2 Quality StreetNorth Berwick, EH39 4HW, UNITED KINGDOM



### **Alliance for Water Stewardship (AWS)**



Handwash basin in main office building.jpg



Kitchen in factory including drinking water dispenser and basin.jpg



### **Alliance for Water Stewardship (AWS)**



Factory chemical storage.jpg



**Alliance for Water Stewardship (AWS)** 



Site borehole pipework.jpg



### **Alliance for Water Stewardship (AWS)**



Septic tank 3 manhole.jpg



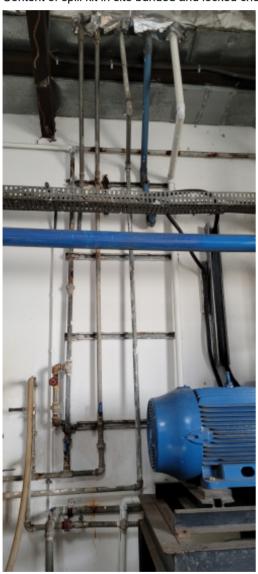
Packaging material on site.jpg



### **Alliance for Water Stewardship (AWS)**



Content of spill kit in site bunded and locked chemical store.jpg



Pipework inside the factory for the cooling tower.jpg



### **Alliance for Water Stewardship (AWS)**



Equipment washing station in factory.jpg



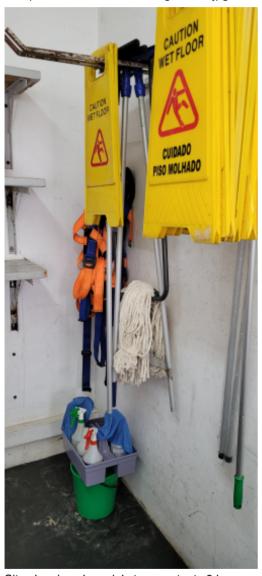
Minor water leak outside of the office building.jpg



### **Alliance for Water Stewardship (AWS)**



Pumps for the site water storage tanks.jpg



Site cleaning chemcial store contents 3.jpg



### **Alliance for Water Stewardship (AWS)**



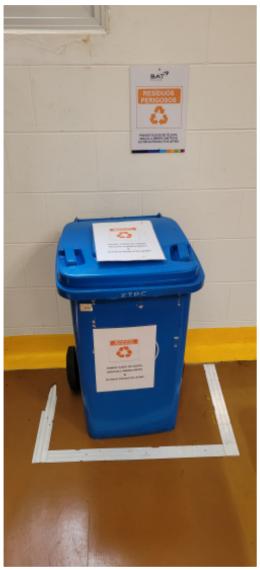
Water dispenser on site.jpg



Urinals in main factory restroom.jpg



### **Alliance for Water Stewardship (AWS)**



Waste bin for recyclable materials.jpg



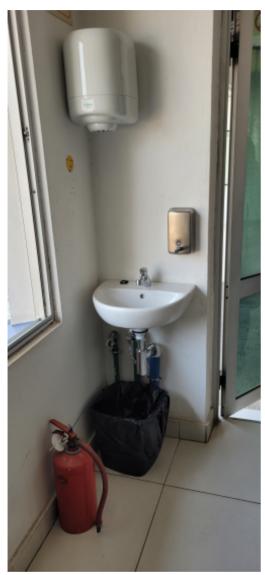
## **Alliance for Water Stewardship (AWS)**



Main bathroom meter.jpg



### **Alliance for Water Stewardship (AWS)**



Handwash basin inside site canteen.jpg



### **Alliance for Water Stewardship (AWS)**



Site canteen kitchen meter.jpg



Maintenance schedule in main factory restroom.jpg



### **Alliance for Water Stewardship (AWS)**



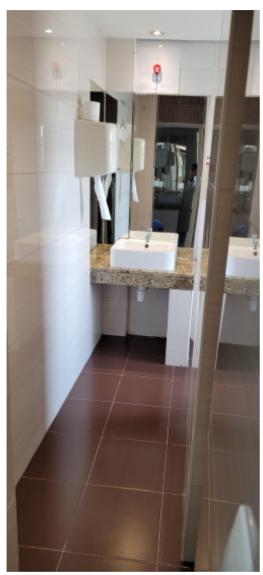
Site EHS dashboard.jpg



Site policies including AWS commitment displayed on site.jpg



### **Alliance for Water Stewardship (AWS)**



Handwash basin and soap dispenser in mainoffice building.jpg



**Alliance for Water Stewardship (AWS)** 

Audit Number: AO-000739



Water meter and pipework inside the factory for the cooling tower.jpg



### **Alliance for Water Stewardship (AWS)**



Eyewash station in factory near chemical storage.jpg



### **Alliance for Water Stewardship (AWS)**



Toilet in main factory restroom.jpg



### **Alliance for Water Stewardship (AWS)**



Showers in main factory restroom.jpg



### **Alliance for Water Stewardship (AWS)**



Kitchen inside the site canteen.jpg



Pipework from the site borehole.jpg



### **Alliance for Water Stewardship (AWS)**



Site underground water storage tank.jpg



On-site clinic contents.jpg

# WSAS STEWARDSHIP ASSURANCE SERVICES

### **Alliance for Water Stewardship (AWS)**



Site bunded and locked chemical store 1.jpg



### **Alliance for Water Stewardship (AWS)**



Spill kit in the site bunded and locked chemical store.jpg



Paved road surface inside the site.jpg



### **Alliance for Water Stewardship (AWS)**



Site above ground water storage tanks pipework.jpg





### **Alliance for Water Stewardship (AWS)**

Audit Number: AO-000739



On-site clinic.jpg



Handwash basins in main factory restroom.jpg

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### **Alliance for Water Stewardship (AWS)**



Pumps for the site water storage tanks and fire suppression system.jpg



Toilet in main office building.jpg



### **Alliance for Water Stewardship (AWS)**



Cooling tower above the factory 2.jpg



Septic tank 4 manhole.jpg



### **Alliance for Water Stewardship (AWS)**



Site borehole meter.jpg



Pipework for fire suppression system.jpg



**Alliance for Water Stewardship (AWS)** 



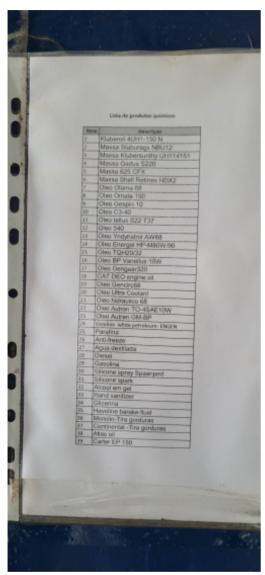
Eyewash station next to factory chemical storage with maintenance card not completed.jpg



Contents of spill kit next to factory chemical storage.jpg



### **Alliance for Water Stewardship (AWS)**



List of contents of site bunded and locked chemical store.jpg



Spill kit next to factory chemical storage.jpg



### **Alliance for Water Stewardship (AWS)**



Kitchen for main openplan office area.jpg



Water pump inside the factory.jpg



Site above ground water storage tanks.jpg

# WSAS STEWARDSHIP ASSURANCE SERVICES

### **Alliance for Water Stewardship (AWS)**



Fire suppression system in factory.jpg



### **Alliance for Water Stewardship (AWS)**



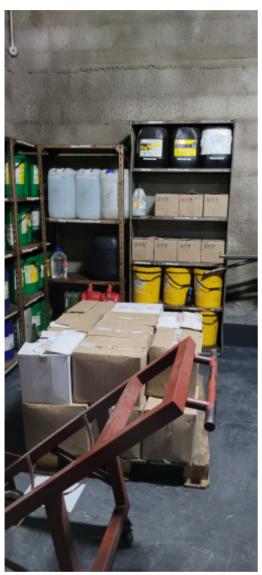
Site borehole.jpg



Kitchen in office area.jpg



### **Alliance for Water Stewardship (AWS)**



Site bunded and locked chemical store 2.jpg



**Alliance for Water Stewardship (AWS)** 

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Septic tank 1.jpg



Product packaging.jpg

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### **Alliance for Water Stewardship (AWS)**

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Meter for the site water storage tanks pipework.jpg



Site bunded and locked chemical store 4.jpg

2 Quality StreetNorth Berwick, EH39 4HW, UNITED KINGDOM



### **Alliance for Water Stewardship (AWS)**

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Site bunded and locked chemical store 3.jpg



Evidence of dry cleaning of factory equipment without the use of water.jpg



### **Alliance for Water Stewardship (AWS)**



Site cleaning chemcial store contents 2.jpg



Site generator.jpg



**Alliance for Water Stewardship (AWS)** 



Medical waste disposal bin.jpg



## **Alliance for Water Stewardship (AWS)**



Site cleaning chemcial store contents 1.jpg



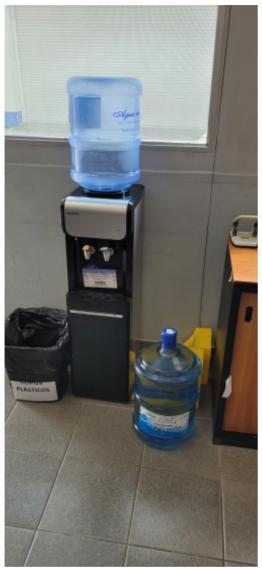
### **Alliance for Water Stewardship (AWS)**



Meter to pumps from above ground water storage tanks.jpg



### **Alliance for Water Stewardship (AWS)**



Drinking water station on site.jpg



### **Alliance for Water Stewardship (AWS)**



Locked door to site bunded and locked chemical store.jpg



Handwash basin at site entertainment area.jpg



### **Alliance for Water Stewardship (AWS)**



Spill kit in site bunded and locked chemical store 2.jpg



Sink for kitchen inside the site canteen.jpg



### **Alliance for Water Stewardship (AWS)**



Site canteen.jpg



Labels for packaging material.jpg



### **Alliance for Water Stewardship (AWS)**



Cooling tower above the factory 1.jpg



Site pest control equipment.jpg



### **Alliance for Water Stewardship (AWS)**



Shower inside factory restroom.jpg