

# CERTIFICATION REPORT

## Alliance for Water Stewardship (AWS)

Audit Number: AO-000386

### SITE DETAILS

Site: **PMI Netherlands - Bergen op Zoom**  
Address: Marconilaan 20, 4622 RD, Bergen op Zoom, NETHERLANDS  
Contact Person: Josien van der Ham  
AWS Reference Number: AWS-000451  
Site Structure: Single Site

### CERTIFICATION DETAILS

Certification status: Certified Core  
Date of certification decision: 2023-Jan-30  
Validity of certificate: 2026-Jan-30

### AUDIT DETAILS

Audited Service(s): AWS Standard v2.0 (2019)  
Audit Type(s): Initial Audit  
Audit Start Date: 2022-Oct-03  
Lead Auditor: Tanya Christensen  
Audit team participants:  
Ethel Pirola Igoa  
Site Participants:  
Josien van der Ham, EHS Engineer II  
Piet de Kock, Department Head HSE  
Tiago Silva, Maintenance Engineer  
Fotios Panagiotopoulos, Engineering Manager  
Hakan Kurtoglu, Director  
Remco Dorst, Consultant  
Jennifer Bree, Employee

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### ADDITIONAL INFO

**Summary of Audit Findings:** A total of 15 findings were raised during the certification audit, 2 major non-conformities, 11 minor non-conformities, 2 observations. The major non-conformities were of sufficient concern to warrant the categorization of the non-conformity as major and related to sustainable water balance.

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 20/02/2023.

The major non-conformities must be sufficiently addressed, and evidence submitted to WSAS within 90 days of receipt of the report by 19/03/2023.

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

The audit team recommends certification of PMI Investments BV - Bergen op Zoom site at Core level pending approval of the corrective actions plan and closure of the major non-conformities.

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

The Client has successfully resolved the major non-conformities and submitted the corrective action plan addressing all findings.

**Scope of Assessment:** The scope of services covers the Initial certification audit for assessing conformity of PMI Investments BV against the AWS International Water Stewardship Standard Version 2.

PMI Investments BV is located in the eastern part of the city Bergen op Zoom in southern Netherlands, within the industrial estate 'De Lage Meren'. It consists of the Main Site, where the Expanded Tobacco and Cast Leaf Processing Centres are located, and the West Site, where the Flavour Processing Centre is located. The majority of the site is taken up by warehousing facilities for the supply chain hub. There are no end-use tobacco products being manufactured onsite, they produce the semi-finished products for other PMI factories and are the main EU supply chain hub. The majority of the water used onsite is for operating the boilers and cooling towers and the site's water ratio is therefore uniquely linked to their energy use, rather than their production processes.

The PMI BOZ site sits within the border surface water catchment of the Schelde Basin and the Maas Basin. The river De Zoom flows from east to west in the northern part of the PMI Site and the site does not extract surface water for their production processes. The water supplier to PMI BOZ is Brabant Water, which extracts the water from two groundwater withdrawal points at Bergen op Zoom and Wouw. Brabantse Delta received all wastewater from PMI BOZ and is responsible for processing it at their wastewater treatment plant (WWTP), before it is ultimately discharged into the Westerschelde.

The audit was conducted onsite on the 4-6 October 2022

The onsite site visit included the assessment of the PMI Bergen op Zoom production facilities and all water related infrastructure onsite.

### FINDINGS

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### NUMBER OF FINDINGS PER LEVEL

<b>Observation</b>	2
<b>Minor</b>	11
<b>Major</b>	2

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## Alliance for Water Stewardship (AWS)

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### FINDING DETAILS

Finding No:	TNR-001635
Checklist Item No:	1.3.2
Status:	Closed
Finding level:	Major
Due date:	2023-Mar-19
Checklist item:	Site water balance, including inflows, losses, storage, and outflows shall be identified and mapped
Findings:	The water balance does not adequately map the sites losses and storage.
Corrective action:	<ol style="list-style-type: none"><li>1. Map losses - ' Losses of water due to: -run-off (toilets and showers) - evaporation via steam - water contained in manufactured product (water in cleaning badges treated as chemical waste and -water used as ingredient and losses due to sprinkler tests)</li><li>2. Map Storage - 'Map storage of water due to: -firefighting tanks (2 sprinkler water tanks on site) - water in pipeline</li><li>3. Update Visio water balance 'Update water balance with losses and storage included'.</li><li>4. Sharing Results Upload in Intact</li></ol>

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## Alliance for Water Stewardship (AWS)

Audit Number: AO-000386

Finding No:	TNR-002530
Checklist Item No:	1.3.3
Status:	Closed
Finding level:	Major
Due date:	2023-Mar-19
Checklist item:	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.
Findings:	The site has not adequately quantified their water balance, or accounted for any losses or storage volumes.
Corrective action:	<p>The water balance equation must balance. Reassessment of site water balance on inflows, losses, storage and outflows.</p> <p>The water balance equation must balance (definition) an error of up to 5% difference between inflows and outflows is acceptable.</p> <p>Account for all the losses Recalculate the losses and are reflected in the water balance</p> <p>Account for all the storage Recalculate the storage and are reflected in the water balance</p> <p>Sharing results Upload in Intact</p>

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## Alliance for Water Stewardship (AWS)

Audit Number: AO-000386

Finding No: TNR-002522  
Checklist Item No: 1.3.6  
Status: In Progress - CA plan approved  
Finding level: Minor  
Due date: 2023-Dec-19  
Checklist item: On-site Important Water-Related Areas shall be identified and mapped, including a description of their status including Indigenous cultural values.  
Findings: The site has not supplied a description and the status of its singular onsite IWRA, the ornamental pond.  
Corrective action: Add a description of the ornamental pond  
"Update the documentation:  
-Size of the ornamental pond  
- year build  
- function  
- pictures"  
  
Define the status of the ornamental pond  
"Regarding status, it will be reported whether it is in good, poor, deteriorating or improving condition.  
Specific concerns, such as 'polluted' or 'drying' will be noted"

Finding No: TNR-002523  
Checklist Item No: 1.5.5  
Status: In Progress - CA plan approved  
Finding level: Minor  
Due date: 2023-Dec-19  
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: The site has not supplied the 'IWRA Risk Assessment; document prepared by the Antea Group and the status of the catchment IWRA's could therefore not be verified.  
Corrective action: Provide the IWRA assessment prepared by Antea. The file was not properly uploaded in Intact.  
  
Upload the file in Intact.

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## Alliance for Water Stewardship (AWS)



Audit Number: AO-000386

Finding No: TNR-002427  
Checklist Item No: 1.5.7  
Status: In Progress - CA plan approved  
Finding level: Minor  
Due date: 2023-Dec-19  
Checklist item: The adequacy of available WASH services within the catchment shall be identified.  
Findings: Although the site has supplied adequate data for the Netherlands, no attempt has been made to supply WASH services data from the catchment.  
Corrective action: Collect more detailed data from stakeholders, such as government agencies, environmental bodies (Brabantse Delta, Brabant Water) or NGO's about WASH services data.

Finding No: TNR-002429  
Checklist Item No: 1.7.1  
Status: In Progress - CA plan approved  
Finding level: Minor  
Due date: 2023-Dec-19  
Checklist item: 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.  
Findings: The site has not adequately identified the physical, reputational or regulatory risks, resulting from the water risks listed, nor have the potential costs or business impacts been identified.  
Corrective action: "identify the physical, reputational or regulatory risks, resulting from the water risks listed"  
Re-Assess based on the water risks for PMInv the physical, reputational or regulatory risks in line with local legislation and stakeholder identified risks  
  
Identify potential business impact or potential costs  
Define business impact for the risks and calculate/estimate costs where possible

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Finding No: TNR-002430  
Checklist Item No: 1.7.2  
Status: In Progress - CA plan approved  
Finding level: Minor  
Due date: 2023-Dec-19  
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 has identified water-related opportunities, but they have not assessed any potential savings or business opportunities from them.  
Corrective action: Assess savings for water-related opportunities  
Calculate potential savings for water-related opportunities e.g., for reducing water use but also intangible savings like long term security, image, etc.  
  
Assess business opportunities for the water-related opportunities  
Contact stakeholders in the catchment area to align on business opportunities.

Finding No: TNR-002432  
Checklist Item No: 1.8.1  
Status: In Progress - CA plan approved  
Finding level: Minor  
Due date: 2023-Dec-19  
Checklist item: Relevant catchment best practice for water governance shall be identified.  
Findings: The 'Best Practice' spreadsheet does not describe the initiative and why it is considered as 'best practice'.  
Corrective action: Describe why the identified initiative is a best practice.  
Add to the overview "best practices" the explanation per initiative and why it is identified as a best practice



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Finding No: TNR-002433  
Checklist Item No: 1.8.5  
Status: In Progress - CA plan approved  
Finding level: Minor  
Due date: 2023-Dec-19  
Checklist item: Relevant sector and/or catchment best practice for site provision of equitable and adequate WASH services shall be identified.  
Findings: Most of the examples listed under WASH in the 'best practice' spreadsheet would only be considered standard practice and the possible best practice examples are not explained, in terms of their inclusion.  
Corrective action: Identify which are the best practices for WASH  
"Add a comment per example if it is considered a standard practice or a possible best practice.  
(Identify best practices by a variety of methods such as regulatory, scientific, and stakeholder input. Review publications on WASH from Brabant Water and Brabantse Delta and gemeente Bergen op Zoom)"  
  
Describe why the identified initiative is a best practice  
Add the explanation in the file why it is identified as a best practice

Finding No: TNR-001637  
Checklist Item No: 2.3.1  
Status: In Progress - CA plan approved  
Finding level: Minor  
Due date: 2023-Dec-19  
Checklist item: 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.  
Findings: The site has not formulated a water stewardship strategy.  
Corrective action: Formulate a water stewardship strategy  
Design a template for the water stewardship strategy to use for all PMI AWS sites  
  
Integrate central PMI template in local AWS plan  
After receiving template, modify existing AWS plan based on central PMI template

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Finding No:	TNR-002520
Checklist Item No:	2.3.2
Status:	Open
Finding level:	Observation
Checklist item:	A water stewardship plan shall be identified, including for each target: <ul style="list-style-type: none"><li>- How it will be measured and monitored</li><li>- Actions to achieve and maintain (or exceed) it</li><li>- Planned timeframes to achieve it</li><li>- Financial budgets allocated for actions</li><li>- Positions of persons responsible for actions and achieving targets</li><li>- Where available, note the link between each target and the achievement of best practice to help address shared water challenges and the AWS outcomes.</li></ul>
Findings:	The site should not include day-to-day operational activities in their Water Stewardship Plan, as they do not contribute towards the site improving their stewardship capabilities.
Finding No:	TNR-001639
Checklist Item No:	2.4.1
Status:	In Progress - CA plan approved
Finding level:	Minor
Due date:	2023-Dec-19
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 has not defined any plans to mitigate external water risks outside the control of the site.
Corrective action:	Engage with stakeholders Brabantse Delta and Brabant Water about the identified water risk, to define the plan together with them.

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## Alliance for Water Stewardship (AWS)

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Finding No: TNR-002444  
Checklist Item No: 3.9.2  
Status: In Progress - CA plan approved  
Finding level: Minor  
Due date: 2023-Dec-19  
Checklist item: Actions towards achieving best practice, related to targets in terms of water balance shall be implemented.  
Findings: The evidence supplied for the indicator, does not match the actions being undertaken by the site.  
Corrective action: Ensure that the evidence supplied match the actions being undertaken by the site.

"Correct file with the evidence for the indicator is uploaded in Intact on 6 October 2022 during the audit. Most likely only the file with the empty template was opened in the system during the Technical review. To avoid only opening the template of 26 September, we tried to delete this entry but that seems not possible. We will file a request to a System Administrator of Intact if they can remove this file to have only the file with the evidence remaining in Intact."

Finding No: TNR-002526  
Checklist Item No: 3.9.3  
Status: Open  
Finding level: Observation  
Checklist item: Actions towards achieving best practice, related to targets in terms of water quality shall be implemented.  
Findings: The evidence supplied in section 3.9 would benefit from being clearly linked to the best practice identified in section 1.8

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## Alliance for Water Stewardship (AWS)

Audit Number: AO-000386

Finding No:	TNR-001642
Checklist Item No:	4.4.1
Status:	In Progress - CA plan approved
Finding level:	Minor
Due date:	2023-Dec-19
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 had not undertaken a review of their current water stewardship plan and the actions that they have completed, in order to inform the next iteration of the plan.
Corrective action:	Undertake a review of the water stewardship plan "Plan quarterly meetings to review the current water stewardship plan. Part of the review will be the evaluation if a target was achieved or not achieved, changes in legislation and lessons learned"  Evaluation of the plan Plan and execute a yearly evaluation of the water stewardship plan with the reviews as input, in order to inform the next iteration of the plan



Signature WSAS

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## Alliance for Water Stewardship (AWS)



Audit Number: AO-000386

### Report Details

Report	Value
Report prepared by	Tanya Christensen
Report approved by	Ruth Wandera
Report approved on (Date)	20 December 2023

### Surveillance

**Proposed date for next audit**  
2023-Oct-04

### Stakeholder Announcements

Date of publication	Location
2022-Sep-28	Bergen op Zoom Bode (local Newspaper - hardcopy and digital version)
2022-Sep-06	AWS Certification and announcement to all internal PMI staff
2022-Sep-25	Brabants Water and Brabantse Delta - key stakeholders sent the announcement
2022-Sep-06	Local newspaper article containing the announcement
Comment	Because the site is manufacturing the production of semi-finished products for tobacco products and smoke-free alternatives. Because of the fact that PM Investments B.V. is a tobacco manufacturing company and the regulatory framework on tobacco is very strictly applied in the Netherlands it was difficult for the site to communicate externally. External communication of a tobacco manufacturing company could be perceived as promotion of tobacco products.

### Catchment Information

#### Catchment Information

The PMI BOZ site sits within the border surface water catchment of the Schelde Basin and the Maas Basin. The Schelde basin has a surface of 9.537 m<sup>2</sup>, including the parts within Belgium. The river De Zoom flows from east to west in the northern part of the PMI Site, and a small amount of clean water is discharged to the river De Zoom. The PMI plant does not extract surface water for their production processes. For the PMI site, surface water issues are linked to wastewater discharge and groundwater issues linked to extraction of water supplies.

Brabant Water supplies water to the PMI site which is sourced from two extraction fields; Bergen op Zoom and Wouw. The protected groundwater layer 'Waterproductiebedrijf Bergen op Zoom', which is located 60m below ground, begins south of Bergen op Zoom and the extraction wells source the water from the groundwater body 'Zoet grondwater in dekzand'. The other groundwater layer 'Waterproductiebedrijf Wouw' starts at 80 m and the extraction well pumps water from the groundwater body 'Zand Maas'. The groundwater is brackish at a depth from 100 to 200 m and it cannot be used for groundwater extraction. In the groundwater body to the west of the extraction location, the groundwater is too saline for extraction as consumable water due to the intrusion from the sea.

All of the site's wastewater is discharged into the sewerage network and processed in the wastewater treatment plant 'RWZI Bath' south of the PMI site. The RWZI final discharge point for the cleaned water is the Westerschelde on the western side of the Schelde-Rijnkanaal/Kreekrak. There are three discharge points in the catchment.

- River Zoom and Bleeklop, which has had ecological water quality assessment in 2009, 2015 and 2019. Chemical and biological quality is deteriorating, Agriculture is seen as the main pressure on surface water quality. Targets have been set for 2027 across NL.
- KRW discharges into canal Bath-Oost. The ecological quality is assessed by analysing the chemical, physical and biological characteristics. The chemical water quality is deteriorating – this is seen in the exceedance in mercury concentrations, PBDE and fluoroanthene concentrations. Upgrading sewage plant.
- Final discharge point is the estuary Westerschelde: Chemical and unique chemical components are in the red zone; this area is of great importance for coastal breeding birds and a Natura 2000 nature reserve.

### Client Description and Site Details

#### Client/Site Background

The PMI Investments BV - Bergen op Zoom (BOZ) plant was established in 1970, has a 332.250 m<sup>2</sup> site footprint and currently has about 300 employees and 300 contractors onsite. There are four distinct business units housed at the site:

- Expanded tobacco Processing Centre (EPC),
- Castleaf Processing Centre (CPC),
- Flavour Processing Centre (FPC),
- PMI Supply Chain (SC), main EU SC Hub, contains 55K pallet spaces.

The site produces the semi-finished products to be exported to other PMI factories, such as: combustible products, heated tobacco products and nicotine delivery products. The EPC, CPC and FPC businesses operate one line each, with a mixture of shifts and operators. Maintenance activities are overseen by a team of 45 Mechanic and Electronic Engineers. Facility management services are outsourced to ISS and internal logistics services are outsourced to DHL.

PMI BOZ is located in the eastern part of the city Bergen op Zoom, within the industrial estate 'De Lage Meren'. It consists of the Main Site, where the EPC and CPC processing takes place, and the West Site, where the FPC is located. Most of both sites is taken up by warehousing facilities. The water supplier to PMI BOZ is Brabant Water, which extract the water from two groundwater withdrawal points at Bergen of Zoom and Wouw. Brabantse Delta receives all wastewater from PMI BOZ and is responsible for processing it at their wastewater treatment plant (WWTP), before it is discharged into the Westerschelde.

The majority of the water used onsite is for operating the boilers and cooling towers and the site's water ratio is therefore uniquely linked to their energy use, rather than their production processes. The site engaged the Antea Group to work on the catchment water balance and water quality issues, as well as the catchment IWRAAs.

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**Summary of Shared Water Challenges**

**Summary of Shared Water Challenges**

The site has identified their shared their water challenges through the WWF Water Risk tool, and they are:

- Degrading water surface quality
- Potential biodiversity degradation.
- Flood Occurrence
- Drought Occurrence
- Baseline water stress

**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.*        
 Yes

Comment      The site is located within a single water catchment

**0.1.1.2**      *The scope of the proposed certification shall be under the control of a single management system.*        
 Yes

Comment      The PMI Investments BV site operates under 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.*        
 Yes

Comment      The scope of certification is for a homogenous primary production system, water management, product range and market structure.

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### 1 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.



Yes

Comment The site has supplied a Google Maps data file, with a number of different data layers and maps. The site itself is marked in pink with the catchment boundary marked as a red circle around the site. The edges of the circle have been defined by the location of the Wastewater Treatment Plant (WWTP) and the extraction boreholes from the water supplier. There are map layers for the rivers near the site: the Schelde and De Zoom, including the surface water catchment for the Schelde River.

The Wastewater Service Provider Brabantse Delta Bath (RWZI) is mapped, and their discharge point into the Westerschelde and the ultimate receiving point in the North Sea. The water service provider Brabant Water, operate two extraction boreholes at Bergen op Zoom and Wouw, both of the groundwater withdrawal areas are mapped.

The site also supplied a number of site maps (pdf's) showing the water pipe network throughout the site: water in / water out and sewage networks. This matched the water infrastructure elements observed during the site tour.

**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:*

- 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.



Yes



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**Comment** The site has mapped both their external and internal stakeholders, which identifies outsourced services. The site has mapped companies within the same industrial estate 'De Lage Meren', regulatory stakeholders, AWS certified sites in the NL (Coca cola and Nestle Waters), commercial stakeholders within the water catchment and environmental groups.

The stakeholders listed are representative of relevant stakeholders and considers the physical scope of the site, including the site's ultimate water source and receiving water body. The site has mapped the level of influence, power to influence and the engagement strategy with the stakeholder.

The Local Auditor pointed out that Brabant Water sits within a regional water authority, Brabant Delta, but these are not currently identified in the stakeholder list. This was amended in subsequent submissions. The biggest suppliers on the list are DHL as they are the internal logistics partner. ISS manage some onsite utility equipment, grease separators, sewage pipe infrastructure (if there is a leak), and water pipe management.

Specific stakeholder consultation activities are evidenced in 3.8.1 in the stakeholder communication logbook.

**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.* ✔  
Yes

**Comment** The site has mapped their stakeholder groups in line with the 'Stakeholder influence and engagement matrix'.

**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.* ✔  
Yes

**Comment** The site has an overall Emergency Response Plan (EHSS Noodplan) in place, which covers water related issues, such as flooding, heavy snowfall and storms. The FPC produces the flavor and casings for other affiliates and it has a dedicated section in the emergency response plan based on risk approach.

Chemical spillage incidents impact on water courses and depending on volume, if it is less than 20l then a technician/operator can treat it themselves and it's considered a small incident. A larger incident is above 20l. the technician will then dial 333 and access the onsite emergency response team. These services are outsourced to a service provider. They assess the incident onsite and complete an emergency response record. The EHS Manager and EHS Engineer are responsible for managing the emergency responses and their phone is on 24/7.

The uses Emergency Cards, as their main internal communication, signposting all staff to relevant emergency services, depending on the incident. All chemicals have a pictogram, and the picture determines the response strategy. There is diesel storage on site, and it has a corresponding emergency response plan.

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

**Comment** The water balance 'Aangepate waterbalans' was supplied as a visio chart and it does not adequately identify the losses and storage elements, for example the water storage for the sprinkler system is not identified, despite being a large volume of water.





EHS Engineer has put in a request for an additional 10 water meters, as the tap water that feeds the canteen is not measured, despite running dishwashers.

**Finding No: TNR-001635**

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<b>1.3.3</b>	<i>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.</i>	 closed
Comment	<p>The site has made a good start on the site water balance, but also knows that it has work to do in quantifying the site water balance, as there are some blind spot due to a lack of water meters e.g., to understand 'tap water' use onsite. There are a total of 23 water meters that collect data round the clock and every 2-3 days the data from all utility meters goes to a server and a more in-depth analysis is undertaken. The 'waterbalans' spreadsheets, supplies data on the annual variance in water usage rates up to 2021. The data are from the water meters and provides basic water in/out overview.</p> <p>The water balance itself 'Aangepate waterbalans' is a visio chart, which has also been converted to a pdf file. PMI have done a water balance for January 2018, which contains calculated, as well as metered data. And one for September 2022 which contains meter readings only. There are too many unknowns in the balance calculation; according to the figure all of the incoming water to the mains building (190,981 m3) goes to Process Water, but only 86,553 m3 are accounted for in the Process Water outlets. The water balance has not included the water stored for fire prevention and does not adequately explain or account for losses.</p> <p style="text-align: right;"><b>Finding No: TNR-002530</b></p>	
<b>1.3.4</b>	<i>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.</i>	 Yes
Comment	<p>The site has produced a 'water analysis' presentation that summarises the water quality testing activities undertaken by the site. There are different testing regimes in place for incoming water, process water, wastewater and legionella testing. For each testing regime and screenshot of the testing parameters have been included. The frequency of testing is as follows:</p> <ul style="list-style-type: none"> <li>- Incoming water is measured at 2 locations. Main Site and West Site. Frequency: Every Month</li> <li>- Process water: process water, Softened water, Reverse Osmosis, Boiler feed and Boiler nr 5. The frequency of testing is weekly.</li> <li>- Wastewater: Analysis is undertaken according to Lozingsvergunning in line with their environmental permit.</li> <li>- Legionella: 6 samples are taken from the cooling towers and analysed quarterly. Eye wash stations and showers are checked for legionella every 6 months. Yearly temperature checks and weekly temperature measurements</li> </ul> <p>PMI Investments BV have engaged the consultancy firm Antea, to undertake work on onsite and catchment water quality, the catchment water balance and IWRA's.</p>	
<b>1.3.5</b>	<i>Potential sources of pollution shall be identified and if applicable, mapped, including chemicals used or stored on site.</i>	 Yes
Comment	<p>The site has produced a PowerPoint presentation outlining the different chemical storage locations at the West Site and Main Site. The audit team visited the chemical storage for the cooling towers. The site has numerous and very complex chemical storage facilities, and all potential incidents are contained within the emergency response plan. Ethanol and diesel storage are in double compartments and glycerine has its own containment chamber. The 'chemical management' presentation is comprehensive. it identifies and maps all potential sources of pollution, listing the chemical stored.</p>	
<b>1.3.6</b>	<i>On-site Important Water-Related Areas shall be identified and mapped, including a description of their status including Indigenous cultural values.</i>	 in progress

Audit Number: AO-000386

**Comment** The site has mapped their onsite and catchment IWRA on Google Maps, although the copy supplied by the site does not contain the IWRA layer. The site also supplied screenshots of the individual IWRA, including the single onsite IWRA the Ornamental Pond. The screenshot clearly shows the IWRA layer on Google Maps.

The site has identified and mapped the ornamental pond, but they have not provided a description of its status.

**Finding No: TNR-002522**

**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.* ✔  
Yes

**Comment** The site has prepared a water-related costs table (2021) which contains good data on water-related costs. Some of the costing headlines are difficult to understand as there is no explanation of what activities and services underpin the figure, such as pollution units, contract costs and extraordinary costs. For example, the pollution units are set by the WWTP operator, and the site is charged on the water quality levels of their wastewater.

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

**Comment** The site supplied a presentation that summarises the WASH conditions onsite. There are water dispensers and vending machines distributed throughout the site as observed by the WSAS Audit team. There are hand washing instructions in Dutch and English in the toilets, it is clear that robust Covid precaution have been in place during lockdown, hand sanitisers are still supplied across the site. There are two shower locations at the main site and on the west side and disabled toilets are readily available. The catering company running the canteen, Appel, hold their own ISO 9001 and 14001 certifications.

There are no legal requirements for the number of toilets, showers and sinks that the site must supply, according to the Labour Conditions degree. But PMI use the guideline of 15 toilets per gender. The footprint area for a toilet must be 1.65 x 2.2 m in accordance with building regulations.

The site has supplied a full set of site plans outlined the location of all WASH facilities and also compiled photographic evidence of all onsite WASH facilities to verify their condition.

**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.* ✔  
Yes

**Comment** PMI BOZ have done a comprehensive review of their supply-chain networks, both in terms of primary inputs and outsourced services. They developed a questionnaire that was emailed to all their suppliers and outsourced services. Establishing whether they are within the catchment, what their water related risks are, water quality issues, water quantity i.e., water use per tonne of product they manufacture. PMI BOZ have split their primary inputs into LEAF and DIM, which are the packaging products. The site has identified 10 DIM primary inputs and two Leaf suppliers: Tabaknatie (Belgium) and Alleghany (NL). All suppliers of primary inputs are outside of the catchment.

The site supplied some example questionnaire responses from their primary input suppliers: Permapack

**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

# CERTIFICATION REPORT

## Alliance for Water Stewardship (AWS)

Audit Number: AO-000386

Comment For outsourced and contracted services PMI have developed a similar spreadsheet, summarising the review of 17 service providers to the site and the majority are located within the water catchment. The site has made a significant start in collating water-related information from all their service providers, which is an ongoing piece of work. More detailed information for Solenis, a water management company, has been added as a separate tab in the 'Indirect water use - outsourced services' spreadsheet.

An example questionnaire response from Maas has been attached.

**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.* ✔  
Yes

Comment The site has developed a 'Public Policies' presentation, which names all relevant water related policies. The site amended the presentation as a result of the audit. to include the time frame for the policy, and author (where relevant). The list is comprehensive

An example plan has been uploaded:

Stroomgebied Beheer Plannen rijn-maas-schelde-en-eems-2022-2027 - River basin management plans Rhine, Meuse, Scheldt and Ems 2022 – 2027

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

Comment The site has prepared a 'Legal Aspects' presentation that lists all legal and regulatory requirements along the following categories: National, Local, Catchment & International. PMI BOZ utilises the SHE-Quest legal/regulatory service, which lists any legal and regulatory requirements that the site has to comply with and they undertake all of their formal reporting and submissions through the tool. The service provides quarterly updates in any changes to requirements. Josien is responsible for ensuring the site is up to date on all regulatory reporting. During the audit, the site representative did a search for water and wastewater on the platform, to demonstrate the functionality of the tool. SHE-Quest also audits submissions before they are formally submitted by PMI BOZ and to the relevant authority, some screenshots have been supplied for reference.

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

Comment The site appointed the Antea Group to support them with developing the catchment water balance and made the report available for review. Information of the different water users are not available, so Antea based their catchment water balance calculations on the water extraction licenses operating in the catchment. This a comprehensive report and the calculation methodology is explained and reference appropriately. The WSAS Local Auditor queried whether non-revenue consumption was taking into account in their calculation e.g., farmers doing illegal borehole extraction and the new port development as mentioned by Brabant Water. The queries were answered to the satisfaction of the audit team

The water balances for the catchment area per year are shown in Table 4. In 2018 a negative water balance was observed, which is correct due to the extreme drought observed in that year. In 2018 groundwater levels dropped by 1 to 2 m in this area. The other years show a positive change in water supply. The drop in groundwater levels is restored to average ground water levels in 2020.

The report also contains a water risk assessment, as there where extreme drought in 2018 and 2022. Water companies can reduce the pressure on the pipeline network to supply drinking water, to manage the shortfalls.

# CERTIFICATION REPORT

## Alliance for Water Stewardship (AWS)

Audit Number: AO-000386

**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.* ✔  
Yes

Comment The site has supplied a 'catchment water quality presentation' that was commissioned from the Antea Group. Surface and groundwater protection is achieved in the EU through the European Water Framework Directive and the Dutch equivalent is the "Kaderrichtlijn Water (2000/60/EG)", also known as KRW. It aims to reduce and prevent pollution of water bodies, promote sustainable water use and limit the negative effects of floods and drought. The biological and chemical water quality limits are set in the "Wet Milieubeheer" (Wm).

Antea have conducted a study looking at regulatory framework and the water quality requirements for groundwater and surface water in the PMI BOZ water catchment area. Brabants Water are not sharing any extraction data, but Antea have used the extraction licenses maximum levels to develop the catchment water balance. The physical, biological and chemical status of the groundwater and surface water catchments are presented, including root cause analysis for any changes. Agriculture is seen as the main root cause for groundwater pollution.

A number of factsheets have also been supplied, covering water quality issues in water bodies, such as: groundwater in deep sand layers, the Maas sub-basin and the Schelde sub-basin. The factsheet can be found on the Dutch Water Quality Portal.

**Finding No: TNR-002523**

**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.* ✦  
in progress

Comment As with the onsite IWRA, PMI BOZ have identified and mapped the catchment IWRAs on Google Map. Individual screenshots have been supplied for:

- De Zoom river and waterfront
- Brabantse Wal
- Osterschelde Wetland
- Westerschelde & Saeftinghe Wetland
- Wouw Groundwater protected area
- Bergen op Zoom groundwater protected area

The site has identified and mapped a range of catchment IWRAs. Antea Group have developed a IWRAs Risk Assessment document. covering both on-site and off-site IWRAs, which assessed their status, but this has not been uploaded as evidence and the auditor was therefore not able to verify compliance.

**1.5.6** *Existing and planned water-related infrastructure shall be identified, including condition and potential exposure to extreme events.* ✔  
Yes

Audit Number: AO-000386

**Comment** The site has prepared an indicator specific spreadsheet, covering the activities of Brabantse Delta and Brabant Wate and identifying the water related infrastructure that they oversee. PMI developed a questionnaire to identify planned water related infrastructure and other AWS related information, to help identifying potential shared water challenges. The site has identified a number of activities planned by Brabantse Delta, two of which are water infrastructure related.

- Project on improving their wastewater pressure pipeline (AWP)
- Enhancement of biodiversity hotspots in the Westerschelde area by making dams and pumping stations transitable for fish
- Using sewage sludge as raw material to produce bioplastics (PHA) and constructing boxes, which was previously destined for incineration

The site was unable to obtain any information on the condition of the Brabant Water groundwater wells. They have identified potential future projects together, but none of them are infrastructure related.

**1.5.7** *The adequacy of available WASH services within the catchment shall be identified.* 🚩  
in progress

**Comment** The 'Water supply and sanitation in the Netherlands' document contains a number of graphs outlining the levels of available WASH in the Netherlands, rather than the catchment. The graphs are obtained from the UN SDG6 reporting data on WASH.

**Finding No: TNR-002427**

**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** The site has developed a 'shared water related challenges and opportunities' spreadsheet to cover 1.6.1 and 1.6.2. PMI BOZ have identified shared water challenges and assigned a risk level and prioritised the five challenges. The site has used the WWF water risk filter as the tool to address this indicator. The shared water challenges, in order of prioritisation are:

- Degrading water surface quality
- Potential biodiversity degradation.
- Flood Occurrence
- Drought Occurrence
- Baseline water stress

The table is solely based in the outcome of using the WWF water risk filter, rather than linking the water challenges identified by stakeholders with the site's water challenges. The site has developed a separate 'catchment water-risks and mitigation actions' spreadsheet that lists the relevance to stakeholders of the shared water challenges.

**1.6.2** *Initiatives to address shared water challenges shall be identified.* ✅  
Yes

**Comment** The site has identified potential actions and existing initiatives for the shared water challenges listed on the 'shared water related challenges and opportunities' spreadsheet.

**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.* 🚩  
in progress

# CERTIFICATION REPORT

## Alliance for Water Stewardship (AWS)

Audit Number: AO-000386

Comment The site has developed a 'water risks' indicator presentation and the WWF water risk filter outcomes have been identified in line with the shared water challenges. The presentation looks at the water risks and the availability of local data to support the water risk analysis. This is an interesting piece of work, but it does not analyze the risks in terms of physical, regulatory and reputational risks to PMI BOZ, as indicated in the AWS Guidance. Nor does it look at the potential costs and business impacts of the water risks.

**Finding No: TNR-002429**

**1.7.2** *Water-related opportunities shall be identified, including how the site may participate, assessment and prioritization of potential savings, and business opportunities.* 🚩 in progress

Comment The water risks and shared water challenges are the same for the site, The 'shared water related challenges and opportunities' spreadsheet lists the opportunities that the site have identified to address the water risks/shared water challenges. Please reference indicator 1.6.1. for the relevant evidence. However, the water-related opportunities have not been assessed for potential savings and business opportunities.

**Finding No: TNR-002430**

**1.8** *Understand best practice towards achieving AWS outcomes: 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.* 🚩 in progress

Comment The site has developed a 'Best Practice' spreadsheet document, with a separate tab for each of the five AWS Outcomes under indicator 1.8. For relevant catchment best practice for water governance, the site has identified the following initiatives:

1. Project Schoon Water, reduce of pesticides.
2. Maintenance of Volkerak locks

The page also contains two website links to: Union of Water Boards, who protect the Netherlands against flooding, and the 'Regional strategy for Waterkring West', the West Brabant Water Circle adopted a regional strategy and implementation agenda for climate adaptation.

The spreadsheet would benefit from adding an additional column to describe the initiative and why the site considers it best practice.

**Finding No: TNR-002432**

**1.8.2** *Relevant sector and/or catchment best practice for water balance (either through water efficiency or less total water use) shall be identified.* ✅ Yes

Comment For relevant catchment best practice for water balance, the site has identified the following initiatives:

- Flush water recovery units (STU's) for groundwater (Brabant Water)
- No water on scrubber (PMI Affiliate)
- Double flushing toilet; the inclusion of this standard equipment is not considered best catchment best practice
- Reuse of RO concentrate.

The site has listed a number of additional practices e.g., Making the existing monitoring package of the VZM, of flow rates, chloride concentrations and water levels, more comprehensive in space and time. It is unclear why this is listed in the spreadsheet, as it is not contextualised. Please reference the evidence spreadsheet in 1.8.1

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



# CERTIFICATION REPORT


## Alliance for Water Stewardship (AWS)

Audit Number: AO-000386

Comment For relevant catchment best practice for water quality, the site has identified the following practices:

- Upgrade wastewater measurement software (IFMS) additional details would be welcome, no context for the statement
- Legionella analysis (Maintenance) this is standard practice rather than best practice.
- Perform analysis on incoming water (IFMS)
- Analyse PFAS in tobacco waste (EHS)


Please reference the evidence spreadsheet in 1.8.1

**1.8.4** *Relevant catchment best practice for site maintenance of Important Water-Related Areas shall be identified.*  Yes

Comment For relevant catchment best practice for IWRA, the site has identified the following initiatives:

- Plant 10,000 trees (Brabantse Wal)

Please reference the evidence spreadsheet in 1.8.1

**1.8.5** *Relevant sector and/or catchment best practice for site provision of equitable and adequate WASH services shall be identified.*  in progress

Comment For relevant catchment best practice for WASH, the site has identified a whole range of initiatives, most of which are just considered standard practice. The site has listed some activities that could be considered best practice, such as: Build healthy latrines for low-income people and Provide sanitizers to hospitals, nursing home. However, the site has not supplied any additional evidence to verify these activities, nor explained them beyond a single descriptive line.

Please reference the evidence spreadsheet in 1.8.1

**Finding No: TNR-002433**



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	<p>A signed and publicly disclosed site statement OR organizational document shall be identified. The statement or document shall include the following commitments:</p> <ul style="list-style-type: none"> <li>- That the site will implement and disclose progress on water stewardship program(s) to achieve improvements in AWS water stewardship outcomes</li> <li>- That the site implementation will be aligned to and in support of existing catchment sustainability plans</li> <li>- That the site's stakeholders will be engaged in an open and transparent way</li> <li>- That the site will allocate resources to implement the Standard.</li> </ul>
Comment	The 'water stewardship commitment' covers the requirements of the indicator and has been signed by the Hakan Kurtoglu as the plant manager in August 2022. And this has been published and put up by all site entrances.
2.2	Develop and document a process to achieve and maintain legal and regulatory compliance.
2.2.1	<p>The system to maintain compliance obligations for water and wastewater management shall be identified, including:</p> <ul style="list-style-type: none"> <li>- Identification of responsible persons/positions within facility organizational structure</li> <li>- Process for submissions to regulatory agencies.</li> </ul>
Comment	The site utilizes the SHE-quest online compliance tool, to maintain all legal and regulatory obligations. Josien is responsible for managing all regulatory compliance activities and the functionality of SHE-quest was demonstrated at the audit.
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.
Comment	There are elements of a water stewardship strategy, embedded in the WSP, but it has currently not been distilled into a single strategic water stewardship statement..
	<b>Finding No: TNR-001637</b>
2.3.2	<p>A water stewardship plan shall be identified, including for each target:</p> <ul style="list-style-type: none"> <li>- How it will be measured and monitored</li> <li>- Actions to achieve and maintain (or exceed) it</li> <li>- Planned timeframes to achieve it</li> <li>- Financial budgets allocated for actions</li> <li>- Positions of persons responsible for actions and achieving targets</li> <li>- Where available, note the link between each target and the achievement of best practice to help address shared water challenges and the AWS outcomes.</li> </ul>

# CERTIFICATION REPORT

## Alliance for Water Stewardship (AWS)

Audit Number: AO-000386

**Comment** The PMI BOZ WSP has been split into two sections: social and community actions, and technological actions. At the time of the audit the targets within the plan were not measurable and the site undertook further work to develop the structure of the plan. It was discussed that the site could approach it as an annual plan with measurable targets for that certification cycle.

Although the targets of the current plan are very generic, the detail can be found in the actions. These can now be measures and monitored, they have planned timeframes, budget allocations and staff identified who are responsible for the action. All the technical actions are internal activities, whereas some of the social and community actions are outward looking towards the catchment. Some of the actions consists of day-to-day operational activities, such as 24/7 monitoring of wastewater and water consumption, as well as legionella testing, and do not form part of a plan. The site should not include day-to-day standard operational activities in the plan, as they cannot form part of a stewardship improvement plan.

**Finding No: TNR-002520**

**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. 🚩

in progress






**Comment** The site presented a 'Resilient and Responsive Strategy Plan' which has split the actions along the same lines as the WSP, with social and community actions and technological actions. The document is a thorough breakdown of how the site is going to respond to any internal operational risks. Please reference the AWS Guide as it describes the intent of this indicator, which is how the site will plan to address any external risks outside of the site's direct control or responsibility.

**Finding No: TNR-001639**

# CERTIFICATION REPORT

## Alliance for Water Stewardship (AWS)

Audit Number: AO-000386

3 STEP 3: IMPLEMENT - Implement the site's stewardship plan and improve impacts		
3.1	<i>Implement plan to participate positively in catchment governance.</i>	
3.1.1	<i>Evidence that the site has supported good catchment governance shall be identified.</i>	 Yes
Comment	The site has prepared a presentation for this indicator, listing the activities they have undertaken to support good catchment governance. The following elements have been identified: <ul style="list-style-type: none"> <li>- PMI AWS Ambassadors made a video presentation for world water day, with staff representatives from around the world.</li> <li>- The site produces a.o.ingredients and semi-finished products to cigarettes so there is a focus on anti-littering campaigns.</li> <li>- Conducted a water stewardship open day with SMEs from within the industrial estate.</li> <li>- University outreach on water-related studies; they Hogeschool Zeeland (HZ) University of Applied Sciences has expressed an interest in collaborating with PMI on water related issues.</li> <li>- PMI participated in the 'Advice Report - Production Possibilities for PHA from wastewater' study, conducted by MALM consultancy on behalf of Brabantse Delta. This was completed in 2015 and PMI have approached Brabantse Delta on the status of the report and whether anything further can be explored.</li> <li>- Piet and the team have also produced an AWS information video on the process and the standard, this has been shared widely on LinkedIn and used in general PMI publicity.</li> </ul>	
3.1.2	<i>Measures identified to respect the water rights of others including Indigenous peoples, that are not part of 3.2 shall be implemented.</i>	 N/A
Comment	This indicator does not apply to the PMI Investments BV site.	
3.2	<i>Implement system to comply with water-related legal and regulatory requirements and respect water rights.</i>	
3.2.1	<i>A process to verify full legal and regulatory compliance shall be implemented.</i>	 Yes
Comment	The SHE-Quest system has been assessed extensively (1.5.2) and Josien explained the functionality of the system and is responsible for submitting legal and regulatory reporting.	
3.2.2	<i>Where water rights are part of legal and regulatory requirements, measures identified to respect the water rights of others including Indigenous peoples, shall be implemented.</i>	 Yes
Comment	This indicator does not apply to the PMI Investments BV site.	
3.3	<i>Implement plan to achieve site water balance targets.</i>	
3.3.1	<i>Status of progress towards meeting water balance targets set in the water stewardship plan shall be identified.</i>	 Yes

# CERTIFICATION REPORT

## Alliance for Water Stewardship (AWS)

Audit Number: AO-000386

**Comment** The site has produced a 'water seasonality trend and consumption 2019-2022' presentation for this indicator, which is more suitable for indicator 3.3.2, as it looks at water consumption and water ratio data. There are numerous 'Reduction of potable water consumption' goals/targets in the site's WSP, such as:

- Installation of new meter
- Greater accuracy in water meter readings for ground water withdrawal monitoring "
- Reuse of RO water in process operations in order to reduce potable water (i.e. 7% reduction in Unit Water Consumption)

Progress towards meeting these targets is clearly captured in the WSP.

**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** The site operates 23 water meters, that collect data round the clock. Every 2-3 days the data from all utility meters goes to a server and more in-depth analysis is undertaken. All the utility related equipment is managed through Honeywell BMS and the water efficiency dashboard, records water efficiency data m3/ton ET eqv. which is the water ratio. The daily target consumption rate for water is 600m3, with cooling towers being the highest water demand during summer, and boilers being the highest water demand during winter.

The site's KPI for water balance is the water ratio, which is uniquely affected by energy use, rather than water efficiency by unit produced. The site is tied in to Global KPIs rather than local ones, so regardless of whether they accurately reflect operations on site, they still have to report against them as they stand.

There is a target in the WSP to install water meters to be better understand the site water balance, which will improve the sites understanding of their detailed water use going forward.

The site has identified water scarcity as a shared water challenge and have set water balance/water efficiency targets in their water stewardship plan. WSAS was presented with a project from Gilberts (Maintenance Technician), who has developed a 'Reuse of RO Concentrate' project, which would see significant water savings and reduction of wastewater volumes. This is a great example of PMI staff showing initiative and identifying an innovative sustainability project, which would realise significant wastewater savings. This project has now been incorporated into the amended WSP.




**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** This indicator does not apply to the PMI Investments BV site.

**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.* ✔  
Yes





Audit Number: AO-000386

Comment	<p>The site has developed a presentation on 'Evidence of implemented action related to good water quality' which demonstrates their current activities in ensuring water quality is measured onsite. The site conducts weekly testing on process water; softened water, RO boiler feed and boiler number 5. Monthly testing of incoming water in 2 sample locations based on the QCS strategy - Quality Control Strategy. There are numerous other examples of water quality activities undertaken by the site in the presentation.</p> <p>In terms of what is included in the WSP, some examples of actions contribute towards improved water quality are:</p> <ul style="list-style-type: none"> <li>• Inspection and maintenance interventions of wastewater sewage before discharge</li> <li>• Conducting repairs on wastewater sewage infrastructure</li> <li>• 24/7 monitoring of wastewater consumption and flows for tracking and identifying anomaly detections</li> </ul> <p>Progress towards meeting these targets are captured in the amended version of the WSP.</p>	
<b>3.4.2</b>	<p><i>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.</i></p>	 Yes
Comment	<p>Water quality is a shared water challenge, and the water stewardship plan contains targets for improving the site's effluent. As mentioned in indicator 1.5.5. Antea have identified a number of elevated levels of particular chemicals in the catchment, contained in the 'Catchment water quality presentation'. All effluent from the site is legally compliant, but the site will review their test results against the identified elevated chemicals in the catchment going forward and review performance and potential opportunities for improvement. WSAS will review this in detail at the next surveillance audit.</p>	
<b>3.5</b>	<p><i>Implement plan to maintain or improve the site's and/or catchment's Important Water-Related Areas.</i></p>	
<b>3.5.1</b>	<p><i>Practices set in the water stewardship plan to maintain and/or enhance the site's Important Water-Related Areas shall be implemented.</i></p>	 Yes
Comment	<p>Any IWRA maintenance practices are outlined in the 'Social and Community Actions; section of the WSP. The site has produced a presentation on 'Evidence of IWRA action implementation' which outlines activities that the site has implemented. These include:</p> <ul style="list-style-type: none"> <li>- Clean up event along Zoom River</li> <li>- Anti-littering posters and bins along the Zoom. Trucks use the area outside the incoming gate, next to the Zoom river, as an overnight stop. PMI have supplied a rubbish bin outside the gates to encourage the truckers not to litter.</li> <li>- Working with 'Peukenzee' an organisation that supplies and manages ash-poles for cigarette stubs</li> <li>- World Cleanup Day</li> </ul>	
<b>3.6</b>	<p><i>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.</i></p>	
<b>3.6.1</b>	<p><i>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.</i></p>	 Yes
Comment	<p>There are no national regulations or legal requirements on WASH provision but there is national guidance set by the Ministry of Labour. The guidance is for one toilet per 15 employees of the same gender. The audit team did a visual check of WASH facilities on site, which were deemed satisfactory. The toilets and WASH facilities are outlined in a site map.</p>	

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<b>3.6.2</b>	<i>Evidence that the site is not impinging on the human right to safe water 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.</i>	 Yes
Comment	<p>The site has a very strict regime in place, in terms of controlling all chemicals on site and thereby minimizing the potential impact to communities.</p> <p>The site also responded to the sewage pipe leakage issue, by undertaking a project to assess and upgrade the sewage pipes and have therefore done the appropriate corrective and preventive actions to address the issue.</p> <p>The site is meeting their permit requirements and addressing any issues arising from the environment agency audits.</p> <p>In terms of reducing water use, the site is planning on upgrading their boiler system, which will significantly reduce their overall water use, as that is where the majority of their water is used.</p>	
<b>3.7</b>	<i>Implement plan to maintain or improve indirect water use within the catchment:</i>	
<b>3.7.1</b>	<i>Evidence that indirect water use targets set in the water stewardship plan, as applicable, have been met shall be quantified.</i>	 Yes
Comment	<p>There are currently not any indirect water use targets set in the WSP as the site is at the very early stages of exploring their suppliers and outsourced services.</p> <p>The site has set a target for 'Data request amongst outsourced and contracted service and raw material suppliers' with the following actions identified:</p> <ul style="list-style-type: none"> <li>• Detailed investigation (via data request and engagement) of raw material (DIM) suppliers and outsourced and contracted service provider's: water consumption, quality compliance, exposure to water-related risks and implementation of sustainable water practices</li> <li>• Greater engagement with PM Investments B.V., growth in motivation towards disclosure and Stakeholder engagement, sharing of water data as well as water safeguarding strategies"</li> </ul>	
<b>3.7.2</b>	<i>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 identified.</i>	 Yes
Comment	<p>The site has supplied a number of emails to demonstrate their communication with suppliers and service providers to establish their indirect water use.</p> <p>- Giuseppe Lista from Ineos, who supply Monopropylene glycol (MPG) and they have broken down the embedded use in their product m3/t. they are based in Cologne and therefore out of the catchment. Please reference the DIM emails that have been uploaded..</p> <p>- Contracted services: Maas Automaten (vending machines) used 65,980 liters pr annum - this is the volume of water that the machines use from the onsite water supply, this needs to be included on the onsite water balance.</p> <p>- Appel (canteen) they were asked to provide figures on water consumption. They estimate that they use about 15K liters pr day and the site will install a water meter to establish the consumption volumes.</p> <p>Both Maas and Appel have ecovadis certification (sustainability certification scheme)</p>	
<b>3.8</b>	<i>Implement plan to engage with and notify the owners of any shared water-related infrastructure of any concerns the site may have.</i>	
<b>3.8.1</b>	<i>Evidence of engagement, and the key messages relayed with confirmation of receipt, shall be identified.</i>	 Yes

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Comment The site has completed a 'Stakeholder communication Log' spreadsheet, which lists all the interactions that PMI BOZ have had with the owners of their shared water-related infrastructure: This includes Brabant Water and Brabantse Delta for incoming and outgoing water.

**3.9** *Implement actions to achieve best practice towards AWS outcomes: continually improve towards achieving sectoral best practice having a local/catchment, regional, or national relevance.*

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

Comment Please reference commentary and evidence of indicator 3.1.1.

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

Comment Numerous actions were discussed with the PMI BOZ team during the audit and interviews held with the relevant staff. Actions that apply to this indicator are:

- Dry scrubber project (2019-2022)
- Reuse of RO Concentrate (Gilberts project) being considered, but it has been scoped out.
- Installation of new water meters
- WEI Glidepath (new software) obtaining better water balance data. WEI: Water Efficiency Index.

However, the evidence spreadsheet supplied does not outline the actions discussed during the audit and mainly references other PMI sites, when the indicator is aimed at the site's activities.

**Finding No: TNR-002444**

**3.9.3** *Actions towards achieving best practice, related to targets in terms of water quality shall be implemented.* ✘ No

Comment The site identified the following actions as their best practice:

- Upgrade wastewater measurement software (IFMS) additional details would be welcome, no context for the statement
- Legionella analysis (Maintenance) this is standard practice rather than best practice.
- Perform analysis on incoming water (IFMS)
- Analyse PFAS in tobacco waste (EHS), based on results no PFAS detected.

The evidence spreadsheet that the site has supplied for this indicator, presents the water testing regimes that are in place at the site for weekly and monthly testing and legionella protocols. The legionella protocols and analysis of incoming water are included in the sites WSP, and evidence of action is included in the attached spreadsheet.

**Finding No: TNR-002526**

**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.* ✔ Yes

Comment The site only identified the following best practice initiative for IWRA in indicator 1.8.4: Plant 10,000 trees (Brabantse Wal) but have supplied no evidence to demonstrate any actions towards achieving this. The site has supplied a presentation on actions they are taking towards maintaining IWRA's, but as with 3.9.3 more consideration should be given to linking 1.8.1-1.8.5 best practices to the 3.9.1-3.9.5 indicators. That being said, the site has been very proactive in maintaining IWRA's and are therefore deemed compliant with this indicator.

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

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Comment      The site has implemented the following actions in terms of WASH, which are expanded on in the attached presentation:

- WASH awareness activities onsite, in response to the Covid-19 pandemic
- Hand sanitiser production and donations in 2020 and 2022. Production was done as an exception and executed in accordance with local legislation.



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4 STEP 4: EVALUATE - Evaluate the site's performance.	
4.1	<i>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.</i>
4.1.1	<i>Performance against targets in the site's water stewardship plan and the contribution to achieving water stewardship outcomes shall be evaluated.</i> <span style="float: right;">✔ Yes</span>
Comment	<p>The site has split their WSP between: Social &amp; Community Actions and Technological Actions. The site has stated how each target contributes towards the five AWS outcomes, and the extent to which it has been met.</p> <p>The site has expanded on their WSP and produced an 'Evaluation of WSP' spreadsheet for the step 4.1 indicators, this records performance against targets and value creation.</p>
4.1.2	<i>Value creation resulting from the water stewardship plan shall be evaluated.</i> <span style="float: right;">✔ Yes</span>
Comment	<p>The 'Evaluation of WSP' spreadsheet contains a number of 'value creation' columns. The 'social &amp; community action' page covers social, environmental and results information (Column U, V, &amp; W). The Technical Actions page contains social and environmental value creation.</p> <p>Going forward, the site could add a monetary savings column (if applicable to the action) to the value creation section. It is currently only identifiable if the cost value in the 'costs' column is negative, indicating a saving.</p>
4.1.3	<i>The shared value benefits in the catchment shall be identified and where applicable, quantified.</i> <span style="float: right;">✔ Yes</span>
Comment	The 'social & community benefits' page in the spreadsheet contains catchment activities that the site has implemented. The 'results' column (W) records the site's efforts to quantify the shared value benefits.
4.2	<i>Evaluate the impacts of water-related emergency incidents (including extreme events), if any occurred, and determine the effectiveness of corrective and preventative measures.</i>
4.2.1	<i>A written annual review and (where appropriate) root-cause analysis of the year's emergency incident(s) shall be prepared and the site's response to the incident(s) shall be evaluated and proposed preventative and corrective actions and mitigations against future incidents shall be identified.</i> <span style="float: right;">✔ Yes</span>
Comment	<p>Please reference evidence against 5.5.1 'water related incidents reports and corrective actions' which breaks down emergency incidents from 2021, including root cause analysis and preventive/corrective actions. Some examples are:</p> <p>An incident from February 2021 a spill was caused by a IBC (intermediate built container) falling from a forklift on the top of the tank. The pump started accidentally rather than locked and a small amount was released to Brabantse Delta and their WWTP. The evaluated and proposed preventive and corrective actions, as well as mitigation activities were recorded.</p> <p>January 2021: wastewater pollution units (VVE) from installing new sewage connection in the FPC unit, exceeded the permit levels for discharge. Root cause and preventive and corrective actions identified and implemented</p> <p>The site also supplied a presentation from their Management Review, where incidents are discussed.</p>

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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. ✔

Yes

Comment The site presented a 'List of Stakeholder for questionnaire delivery' during the audit and have provided two examples of completed 'Stakeholder Questionnaire' from Brabant Water and Brabantse Delta. The questionnaire consults the stakeholders on the site's water stewardship performance.

The site prepared a report for their stakeholders 'Water Stewardship - Water performance report of the Dutch affiliate of PM Investments BV which has also been distributed to stakeholders.

**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 The site has completed some of the actions within their current WSP but have not undertaken a review of lessons learnt, to adapt into the next iteration of the WSP. The site provided some good examples of evaluation activities that they have undertaken e.g. repairing a single leak in a sewage connection, has led to a full review of the entire sewage network on site, in order benchmark the condition of the whole network.

**Finding No: TNR-001642**

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5	
STEP 5: COMMUNICATE & DISCLOSE - Communicate about water stewardship and disclose the site's stewardship efforts	
5.1	<i>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.</i>
5.1.1	<i>The site's water-related internal governance, including positions of those accountable for compliance with water-related laws and regulations shall be disclosed.</i> <span style="float: right;">✔ Yes</span>
Comment	The site has prepared an AWS Team Organisational Chart for PMI NL. It includes the senior Project Sponsors, the AWS project Coaches and the PMI Affiliate Buddy (Switzerland). Remko Dorts (Antea) is listed as the project consultant. Josien van der Ham is responsible for all legal and regulatory compliance. This was disclosed in the AWS report for 2022 to all of their stakeholders.
5.2	<i>Communicate the water stewardship plan with relevant stakeholders.</i>
5.2.1	<i>The water stewardship plan, including how the water stewardship plan contributes to AWS Standard outcomes, shall be communicated to relevant stakeholders.</i> <span style="float: right;">✔ Yes</span>
Comment	The site has prepared a robust '2022 Water Stewardship Report' which has been disclosed and communicated to stakeholders. All activities listed are clearly linked to the AWS Standard outcomes. The AWS Questionnaire is also attached.
5.3	<i>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.</i>
5.3.1	<i>A summary of the site's water stewardship performance, including quantified performance against targets, shall be disclosed annually at a minimum.</i> <span style="float: right;">✔ Yes</span>
Comment	The '2022 Water Stewardship Report' provides a good summary of the site's water stewardship performance and has quantified their performance.
5.4	<i>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.</i>
5.4.1	<i>The site's shared water-related challenges and efforts made to address these challenges shall be disclosed.</i> <span style="float: right;">✔ Yes</span>
Comment	The site's shared water challenges were identified from the WWF Water Risk Filter, and these have been communicated in the 2022 water Report. The site has also sent questionnaires out to stakeholders asking them about their perceived water challenges. The WWF shared water challenges are currently quite 'high-level' and need to be translated more into a local context and this will be the focus of the site going forward.
5.4.2	<i>Efforts made by the site to engage stakeholders and coordinate and support public-sector agencies shall be identified.</i> <span style="float: right;">✔ Yes</span>
Comment	PMI Boz have sent a request out to several universities to enquire about potentially collaborating or at least opening up communication roads, for working together on water-related activities. Numerous examples are attached for reference.  The site also engaged Antea to support the site in developing an understanding of catchment water-related issues. The local Municipality are not a permitting authority and there are fewer opportunities to work together on water-related issues.

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- 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.* ✔  
Yes
- Comment OMWB - the local environmental agency for the region, conducted an audit in October 2021 and the site was found to not comply with the maintenance requirements for the onsite grease separator. OMWB undertake an annual audit of the site. The audit also raised that the sewerage system at Wattweg and Marconilaan is not demonstrably leak-proof. The site proactively inspects the entire sewage network.
- The PMI NL site has an environmental risk assessment conducted that is prepared by an external environmental consultancy, such as Tauw or Antea. This is done whenever the site adds a new substance to be stored on site, or if there is a significant change in volumes of a materials being stored i.e. if it changes the permit that the site has. This is produced for Brabantse Delta, to see if it has an impact on the WWTP.
- The site has also prepared a 'Water-related compliance violations and associated corrective actions' presentation, which summarizes any water-related compliance violations and it lists 4 violations for 2021.
- 5.5.2** *Necessary corrective actions taken by the site to prevent future occurrences shall be disclosed if applicable.* ✔  
Yes
- Comment The spreadsheet clearly identifies any corrective actions implemented by the site.
- 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.* ✔  
Yes
- Comment The four violations from 2021 were disclosed by the site to the relevant authorities, but none of them posed a significant risk.

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### Photographic Evidence from Audit



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security valve.jpg

  
Yes