

# **MKS PAMP SA**

**A. ZAUCB00211 – 999.9 Gold Carbon  
Neutral Kilobar**

**B. ZAUCB00216 – 995.0 Gold 1000g  
Bar (Carbon Neutral)**

**C. ZAULB00117 – Gold 999.9 - 400 oz  
Large Bar (Carbon Neutral)**

**D. ZAULB00121 – Gold 995+ - 400 oz  
Large Bar (LBMA - Carbon Neutral)**

**E. ZAULB00122 - Gold 995+ - 400 oz  
Large Bar (SWISS - Carbon  
Neutral)**

**Qualifying Explanatory Statement  
in support of the  
Achievement of and ongoing  
commitment to carbon neutrality**

Application Period: 1<sup>st</sup> July 2022 – 30<sup>th</sup> June 2023 for reconciliation  
1<sup>st</sup> July 2023 to 30<sup>th</sup> June 2024 for new certification

**Date:** 15<sup>th</sup> April 2024

# 1. Executive summary

This document is the Qualifying Explanatory Statement (QES) which provides collected evidence in support of the declaration that MKS PAMP SA:

1. has achieved carbon neutrality for its A. ZAUCB00211 – 999.9 Gold Carbon Neutral Kilobar, B. ZAUCB00216– 995.0 Gold 1000g Bar (Carbon Neutral), C. ZAULB00117 - Gold 999.9 - 400 oz Large Bar (Carbon Neutral), D. ZAULB00121 - Gold995+ - 400 oz Large Bar (LBMA - Carbon Neutral) and E. ZAULB00122 - Gold 995+ - 400 oz Large Bar (SWISS - Carbon Neutral) marketed globally for the period commencing July 2022 to June 2023 (see Section 3); and
2. is committed to maintaining carbon neutrality for its A. ZAUCB00211 – 999.9 Gold Carbon Neutral Kilobar, B. ZAUCB00216– 995.0 Gold 1000g Bar (Carbon Neutral), C. ZAULB00117 - Gold 999.9 - 400 oz Large Bar (Carbon Neutral), D. ZAULB00121 - Gold995+ - 400 oz Large Bar (LBMA - Carbon Neutral) and E. ZAULB00122 - Gold 995+ - 400 oz Large Bar (SWISS - Carbon Neutral) (see section 4).

The carbon neutrality declaration has been made and the collected supporting evidence has been provided in accordance with the requirements prescribed by PAS 2060:2014 – Specification for the demonstration of carbon neutrality.

Tamara Jomaa Shakarchi  
Head of ESG and Philanthropy



April 15<sup>th</sup>, 2024

## 2. General information

PAS 2060 Requirement	Information Relating to the Carbon Neutral Declaration
<b>Entity making PAS 2060 declaration:</b>	MKS PAMP SA
<b>Subject of PAS 2060 declaration:</b>	<p>A. ZAUCB00211 – 999.9 Gold Carbon Neutral Kilobar            B. ZAUCB00216– 995.0 Gold 1000g Bar (Carbon Neutral)            C. ZAULB00117 - Gold 999.9 - 400 oz Large Bar (Carbon Neutral),            D. ZAULB00121 - Gold995+ - 400 oz Large Bar (LBMA - Carbon Neutral)            E. ZAULB00122 - Gold 995+ - 400 oz Large Bar (SWISS - Carbon Neutral)</p> <p>Emissions included:</p> <ul style="list-style-type: none"> <li>- Raw materials</li> <li>- Inbound transportation</li> <li>- Manufacturing</li> <li>- Downstream Distribution</li> <li>- End of Life</li> </ul>

<b>Description of Subject:</b>	<p>A. A. Cast bullion bar made of 1 kg of fine gold (999.9 purity).  B. B. Cast bullion bar made of 1 kg of fine gold (995+ purity).  C. C. Cast bullion bar made of 12.5 kg of fine gold (999.9 purity).  D. D. Cast bullion bar made of 12.5 kg of fine gold (995+ purity).  E. Cast bullion bar made of 12.5 kg of fine gold (995+ purity).</p>
<b>Rationale for selection of the subject:</b>	Out of our cast products range, this product has consistently the highest number of pieces produced, which accounts for a significant amount of MKS PAMP SA's operational emissions. This cast bar is in the same product family, a staple in our gold bar sales.
<b>Boundary:</b>	Cradle-to-Grave
<b>Type of conformity assessment:</b>	Independent third-party certification (see Annex 4)
<b>Baseline date for PAS 2060 programme:</b>	<p><u>Reconciliation of previous forecasted certification:</u> 1<sup>st</sup> July 2022 - 30<sup>th</sup> June 2023:</p> <p>A. ZAUCB00211 – 999.9 Gold Carbon Neutral Kilobar  C. ZAULB00117 - Gold 999.9 - 400 oz Large Bar (Carbon Neutral)  D. ZAULB00121 - Gold995+ - 400 oz Large Bar (LBMA - Carbon Neutral).</p> <p><u>New Product Certification (forecast):</u> 1<sup>st</sup> July 2023 – 30<sup>th</sup> June 2024:</p> <p>B. ZAUCB00216– 995.0 Gold 1000g Bar (Carbon Neutral)  E. ZAULB00122 - Gold 995+ - 400 oz Large Bar (SWISS – Carbon).</p>
<b>Individuals responsible for evaluation and provision of data necessary for declaration:</b>	<p>Tamara Jomaa Shakarchi - Head of ESG and Philanthropy  Emilie Panizzutti – Junior ESG Officer  Marco Villari – ESG Officer</p>

### 3. Declaration of achievement of carbon neutrality

PAS 2060 Requirement	Information relating to the carbon neutral declaration
<b>Declaration of achievement:</b>	Carbon neutrality of A. ZAUCB00211 – 999.9 Gold Carbon Neutral Kilobar, B. ZAUCB00216– 995.0 Gold 1000g Bar (Carbon Neutral), C. ZAULB00117 - Gold 999.9 - 400 oz Large Bar (Carbon Neutral), D. ZAULB00121 – Gold 995+ - 400 oz Large Bar (LBMA - Carbon Neutral) and E. ZAULB00122 - Gold 995+ - 400 oz Large Bar (SWISS - Carbon Neutral) achieved by MKS PAMP SA in accordance with PAS 2060 in December 2023 for the period commencing 1 <sup>st</sup> July 2022, certified by the Carbon Trust, and for the new product certification the period commencing 1 <sup>st</sup> of July 2023.
<b>Recorded carbon footprint of the subject during the period stated above</b>	<p><u>Product Carbon Footprint</u></p> <p>The previous estimated emissions for the gold bars (all reconciliation A, C, D) were equal to 2,731.2 kgCO<sub>2</sub>e/kg for the reconciliation products. Numbers have increased due to the integration of Land Use Change in the calculation. The new emissions are:</p> <p>A. ZAUCB00211 – 999.9 Gold Carbon Neutral Kilobar – 2853 kgCO<sub>2</sub>e/kg</p>

	<p>B. ZAUCB00216– 995.0 Gold 1000g Bar (Carbon Neutral) – 2853 kgCO<sub>2</sub>e/kg</p> <p>C. ZAULB00117 - Gold 999.9 - 400 oz Large Bar (Carbon Neutral) – 2852 kgCO<sub>2</sub>e/kg</p> <p>D. ZAULB00121 – Gold 995+ - 400 oz Large Bar (LBMA - Carbon Neutral) – 2852 kgCO<sub>2</sub>e/kg</p> <p>E. ZAULB00122 - Gold 995+ - 400 oz Large Bar (SWISS - Carbon Neutral) – 2852 kgCO<sub>2</sub>e/kg</p> <p><u>Product Carbon Footprint – Sales Based</u></p> <p>A. ZAUCB00211 – 999.9 Gold Carbon Neutral Kilobar: 72 tCO<sub>2</sub>e</p> <p>B. ZAUCB00216– 995.0 Gold 1000g Bar (Carbon Neutral): 72 tCO<sub>2</sub>e.</p> <p>C. ZAULB00117 - Gold 999.9 - 400 oz Large Bar (Carbon Neutral) and D. ZAULB00121 – Gold 995+ - 400 oz Large Bar (LBMA - Carbon Neutral): 7607 tCO<sub>2</sub>e were emitted by product sold.: 337 tCO<sub>2</sub> for the products sold to the general customers, and 7270 to the specific customer.</p> <p>E. ZAULB00122 - Gold 995+ - 400 oz Large Bar (SWISS - Carbon Neutral) – 172 tCO<sub>2</sub>e.</p> <p>See Annex 1 for further details.</p>
<b>Carbon offsets purchased</b>	<p>653 credits (tCO<sub>2</sub>e) from avoidance offset projects, 7270 credits (tCO<sub>2</sub>e) from sequestration offset project.</p> <p>See Annex 3 for further details.</p>

### 3.1. Carbon footprint methodology

<b>PAS 2060 Requirement</b>	<b>Information relating to the carbon neutral declaration</b>
<p><b>Description of the standard and methodology used to determine GHG emissions and reductions</b></p>	<p>The methodology for calculating the carbon footprint was as follows: The methodology for calculating the carbon footprint was developed to be in accordance with the requirements of ISO 14067 and PAS 2060:2014.</p> <p>The methodology is as follows: The per kg footprint was calculated by the Carbon Trust, using</p> <ol style="list-style-type: none"> <li>primary data provided by MKS PAMP SA for sourcing gold from 1<sup>st</sup> July 2020 to 30<sup>th</sup> June 2023 on a rolling average basis,</li> <li>data for the production emissions of the corresponding financial year. The total footprint was then applied to the mass of gold bars output for the period to yield a kgCO<sub>2</sub>e footprint per kg.</li> </ol> <p>The total footprint of the subject of neutrality was calculated based on actual sales volume for</p> <ol style="list-style-type: none"> <li>ZAUCB00211 – 999.9 Gold Carbon Neutral Kilobar</li> <li>ZAULB00117 - Gold 999.9 - 400 oz Large Bar (Carbon Neutral)</li> <li>ZAULB00121 – Gold 995+ - 400 oz Large Bar (LBMA - Carbon Neutral)</li> </ol> <p>and based on predicted sales volume for</p>

	<p>B. ZAUCB00216– 995.0 Gold 1000g Bar (Carbon Neutral)  E. ZAULB00122 - Gold 995+ - 400 oz Large Bar (SWISS - Carbon Neutral).</p> <p>MKS PAMP SA produces many products at their facility in addition to the gold bars. Therefore, MKS PAMP SA allocated raw material inputs, outputs, and utility usage for each process step based on the mass output of all products manufactured at their factory.</p> <p>Inbound and outbound transportation distances and modes were provided by MKS PAMP SA, and end-of life emissions were calculated using secondary data and assumptions.</p> <p>Activity data was multiplied by emission factors to calculate emissions. For the virgin gold supply, MKS PAMP SA provided the Carbon Trust with supplier-specific emission factors based on reported figures and calculations. Since MKS PAMP SA also uses recycled gold as an input, the virgin gold emission factor was inputted into the EU Product Environmental Footprint Circular Footprint Formula to yield the overall emission factor that was applied to the gold input. Other emission factors were sourced from Government publications (i.e. BEIS), Ecoinvent v3.9.1., and published literature.</p> <p>The provisions of the methodology for calculating the carbon footprint were applied as detailed and the principles set out in PAS 2060 were met.</p>
<p><b>Justification for the selection of the methodologies chosen</b></p>	<p>The carbon footprint of the listed product was calculated using a recognised methodology that was based on the following document:</p> <ul style="list-style-type: none"> <li>- ISO 14067 - an internationally recognised approach to the calculation of representative product CO2e footprints which meets the requirement of PAS 2060 for the substitution of GHG emissions.</li> </ul> <p>The GHG emissions that are accounted for in the footprint study of the product are based on the 100-year Global Warming Potential figures published in the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report, 2014 and include those required by the GHGP Product Standard.</p> <p>Further, the following assumptions were made in quantifying GHG emissions:</p> <p><u>Raw materials:</u></p> <ul style="list-style-type: none"> <li>- The virgin emission factor for gold was provided by PAMP for the top 78% of suppliers on a mass basis; the weighted average emission factors was applied to all virgin inputs.</li> <li>- Certain EFs for chemicals were not available, proxies were used, for example trimercaptotriazine.</li> </ul>

	<p>- Black water and white water are outputs provided by PAMP. It is assumed that water consumption is the sum of these two.</p> <p><u>Packaging:</u> In the absence of specific information, it is assumed that raw materials used in packaging are virgin materials. Since packaging makes up a small proportion of the total footprint, this has a negligible impact.</p> <p><u>End of Life:</u> In terms of the PEF CFF, it is assumed that there is a 100% recycling rate of the gold bar at the end of its life. Products that are large, high purity metals (such as a solid gold bar), will usually be recycled. Products with metals in small amounts, especially where combined or alloyed with other materials, are unlikely to be recycled.</p> <p>For packaging end-of-life, an EU average was used due to the absence of global factors. However, this does not have a material impact on the footprint</p>
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### 3.2. Carbon footprint summary

Carbon Footprint <i>(for latest footprinting year)</i>	Information relating to the carbon neutral declaration
<b>Total Carbon Footprint</b>	<p>The total emissions for all products sold in the boundary is as follows:</p> <p><u>Reconciliation of previous forecasted certification</u> In the previous QES, we estimated the emissions of 54,624.8 tCO<sub>2</sub>e for a total of 20t of products A, C and D and bought 54,625 credits. Actual figures show:</p> <ul style="list-style-type: none"> <li>A. ZAUCB00211 – 999.9 Gold Carbon Neutral Kilobar – <b>72,000.00 kgCO<sub>2</sub>e.</b></li> <li>C. ZAULB00117 - Gold 999.9 - 400 oz Large Bar (Carbon Neutral) and D. ZAULB00121 – Gold 995+ - 400 oz Large Bar (LBMA - Carbon Neutral) – <b>337,000.00 kgCO<sub>2</sub>e. And 7,270,000 kgCO<sub>2</sub>e for a specific customer.</b></li> </ul> <p>The products sold to general customers requested 409 credits (tCO<sub>2</sub>) out of the 54,625 credits of avoidance (tCO<sub>2</sub>). The products sold to specific customers requested 7270 credits (tCO<sub>2</sub>) out of the 11,402 credits of the 11,402 credits of afforestation (tCO<sub>2</sub>).</p> <p><u>New Product Certification (forecast)</u></p> <ul style="list-style-type: none"> <li>B. ZAUCB00216– 995.0 Gold 1000g Bar (Carbon Neutral) - <b>72,000.00 kgCO<sub>2</sub>e.</b></li> <li>E. ZAULB00122 - Gold 995+ - 400 oz Large Bar (SWISS - Carbon Neutral) -<b>172,000.00 kgCO<sub>2</sub>e.</b></li> </ul>

	<p>Actual sales for the products will be reviewed during reconciliation at the end of the certification period, and the footprint and number of offsets required will be adjusted.</p> <p><i>See Annex 1 for further details.</i></p>
<b>Carbon Footprint per functional unit</b>	<p>The previous estimated emissions for the gold bars (all recertification A, C, D), were equal to 2,731.2 kgCO<sub>2</sub>e/kg for the reconciliation products. Numbers have increased due to the integration of Land Use Change in the calculation. The new total emissions per functional unit is as follows:</p> <ul style="list-style-type: none"> <li>A. ZAUCB00211 – 999.9 Gold Carbon Neutral Kilobar – 2,853 kgCO<sub>2</sub>e/kg</li> <li>B. ZAUCB00216– 995.0 Gold 1000g Bar (Carbon Neutral) – 2,853 kgCO<sub>2</sub>e/kg</li> <li>C. ZAULB00117 - Gold 999.9 - 400 oz Large Bar (Carbon Neutral) – 2,852 kgCO<sub>2</sub>e/kg</li> <li>D. ZAULB00121 – Gold 995+ - 400 oz Large Bar (LBMA - Carbon Neutral) – 2,852 kgCO<sub>2</sub>e/kg</li> <li>E. ZAULB00122 - Gold 995+ - 400 oz Large Bar (SWISS - Carbon Neutral) – 2,852 kgCO<sub>2</sub>e/kg</li> </ul> <p><i>See Annex 1 for further details.</i></p>

### 3.3. Carbon offsets

PAS 2060 Requirement	Information Relating to the Carbon Neutral Declaration
<b>Offset methodology</b>	<p>Carbon Credits amounting to a total of <b>653 tCO<sub>2</sub>e</b> from the previous year, <b>7,035 tCO<sub>2</sub></b> bought during the year FY23 and <b>235 credits from the purchase made in December 2023 to complete the compensation</b> are allocated from the CDM and VCS programs, offsetting for Scope 1, 2, and 3 of the emissions from the fabrication of the products.</p> <p><i>See Annex 3 for methodology details.</i></p>
<b>Offset Confirmation</b>	<p>The offsets generated represent genuine, additional GHG emission reductions elsewhere. Projects involved in delivering offsets meet the criteria of additionality, permanence, leakage, and double counting. Carbon offsets are verified by an independent third-party verifier.</p> <p>The credits from the selected carbon offset projects are:</p> <ul style="list-style-type: none"> <li>• only issued after the emission reduction has taken place.</li> <li>• retired prior to the date of the declaration of achievement.</li> <li>• supported by publicly available project documentation on a registry which provides information about the offset project, quantification methodology and validation and verification procedures.</li> <li>• stored and retired in an independent and credible registry.</li> </ul>

	Full details of the carbon offsets included in making this declaration are provided in Annex 3.
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## 4. Declaration of ongoing commitment to carbon neutrality

PAS 2060 Requirement	Information Relating to the Carbon Neutral Declaration
<b>Declaration of on-going commitment:</b>	<p>MKS PAMP SA commits to maintain carbon neutrality for</p> <ul style="list-style-type: none"> <li>A. ZAUCB00211 – 999.9 Gold Carbon Neutral Kilobar</li> <li>B. ZAUCB00216– 995.0 Gold 1000g Bar (Carbon Neutral)</li> <li>C. ZAULB00117 - Gold 999.9 - 400 oz Large Bar (Carbon Neutral)</li> <li>D. ZAULB00121 - Gold995+ - 400 oz Large Bar (LBMA - Carbon Neutral)</li> <li>E. ZAULB00122 - Gold 995+ - 400 oz Large Bar (SWISS - Carbon Neutral)</li> </ul> <p>in accordance to PAS 2060 for the period July 2023 – June 2024. Actual sales for the new products will be reviewed during reconciliation at the end of the certification period and the footprint, and number of offsets required will be adjusted.</p> <p>Carbon neutrality for</p> <ul style="list-style-type: none"> <li>A. ZAUCB00211 – 999.9 Gold Carbon Neutral Kilobar</li> <li>C. ZAULB00117 – 999.9 Gold Carbon Neutral Large Cast Bar</li> <li>D. ZAULB00121 – Gold 995+ - 400 oz Large Bar (LBMA - Carbon Neutral)</li> </ul> <p>for the period July 2023 – June 2024 will be achieved by June 2025.</p>

### 4.1. Carbon management plan

PAS 2060 Requirement	Information Relating to the Carbon Neutral Declaration
Targets for GHG reduction for the defined subject appropriate to the timescale for achieving carbon neutrality	<p>Based on the data period of baseline Year 1 (1<sup>st</sup> July 2022 – 30<sup>th</sup> June 2023), MKS PAMP SA aims to reduce the GHG emissions of all five products</p> <ul style="list-style-type: none"> <li>A. ZAUCB00211 – 999.9 Gold Carbon Neutral Kilobar</li> <li>B. ZAUCB00216– 995.0 Gold 1000g Bar (Carbon Neutral),</li> <li>C. ZAULB00117 - Gold 999.9 - 400 oz Large Bar (Carbon Neutral),</li> <li>D. ZAULB00121 - Gold995+ - 400 oz Large Bar (LBMA - Carbon Neutral)</li> <li>E. ZAULB00122 - Gold 995+ - 400 oz Large Bar (SWISS - Carbon Neutral) as follows:</li> </ul> <p>Short Term: In Year 2 (1<sup>st</sup> July 2023 - 30<sup>th</sup> June 2024), by at least 1.22 % from Year 1, translating into at least 35 kg CO<sub>2</sub>e reduced emissions per kg of gold.</p> <p>Medium Term: In Year 5 (1<sup>st</sup> July 2026 – 30<sup>th</sup> June 2027), by at least 4.88 % from Year 1, translating into 139 kg CO<sub>2</sub>e reduced emissions per kg of gold.</p>



	<p>Long Term: In Year 8 (1<sup>st</sup> July 2029 – 30<sup>th</sup> June 2030), by at least 8.54 % from Year 1, translating into 244 kg CO2e reduced emissions per kg of gold.</p> <p>Moreover, MKS PAMP SA has set SBTi-approved GHG reduction targets for their Scope 1, 2 and 3 by 2030, which demonstrates the company's wider ambitions on overall GHG emission reduction goals.</p> <p><i>Full details of reduction targets are provided in Annex 2.</i></p>
<p>Planned means of achieving avoided GHG emissions</p>	<p>MKS PAMP SA developed a strategy to minimize its GHG emission by focusing on avoidance in the manufacturing processes where the company has complete control (scope 1 and 2 of the products' emissions) and on reduction process where the company has more limited control such as the inbound of raw material (scope 3 of the products' emissions).</p> <p>As such, the plan to avoid GHG emissions lay primarily in MKS PAMP SA manufacturing process at its production site, as these are in our complete control.</p> <p>MKS PAMP SA has planned the following short-term:</p> <p><u>Avoid using of diesel in boilers:</u> Previously, diesel fuel was the second-largest source of emissions in our manufacturing process. In 2020, MKS PAMP SA made a significant change by switching to natural gas, thus eliminating diesel use in daily operations. Now, diesel is only used in our backup generator for emergencies, such as when the power grid fails.</p> <p><u>Avoid the use of fossil fuels for electricity:</u> MKS PAMP SA is committed to sourcing 100% of its electricity from renewable sources and currently purchases Swiss Hydroelectric certificates to achieve this goal. As of January 2022—and since 2017 at our production facility—MKS PAMP SA has sourced 100% of its electricity from renewable sources. The company plans to continue this practice indefinitely. Furthermore, in the latter half of 2023, we installed solar panels at our production site, which now supply 5% of our electricity needs.</p> <p><u>Avoid using an excess of energy in our manufacturing:</u> MKS PAMP SA conducted a thorough energy analysis of its manufacturing process, identifying opportunities to significantly improve energy efficiency and enhance performance monitoring. Initiatives include reusing produced heat, upgrading to more efficient ventilation systems, and developing new interfaces for energy and environmental data monitoring.</p>
<p>Planned means of achieving and maintaining GHG emissions reduction</p>	<p>The majority of GHG emissions related to the product lay in the inbound of raw gold materials. MKS PAMP SA will take the following actions to ensure that reduction occurs:</p>

1. Select environmentally responsible sources: Prioritize suppliers with established GHG reduction goals and those actively pursuing emissions reduction initiatives.
2. Revise contracts to include GHG emissions data: Update our refining contracts and supplier onboarding documents to mandate the inclusion of GHG emissions information.
3. Governance and Strategic Integration: Embedding GHG Reduction Goals Firmly Within Our Operations

1. Source selection

The general sourcing of gold bars includes a mix of mined and recycled sources. The sourcing mix usually depends on market fluctuation regarding the pricing of the material and availability of different sources, and the end consumer's demand. MKS PAMP SA plans to set specific mechanisms to ensure that GHG emissions are considered while making decisions on our sourcing mix.

**Short-term focus:** Conduct a thorough market analysis to identify suppliers with lower GHG emissions or those committed to reducing their emissions footprint.

**Medium-term focus:** Establish internal controls for sourcing carbon emission management. MKS PAMP SA plans to continuously monitor its supply flow to ensure no significant discrepancies in the sourcing mix. Intake in sources is done daily at the production site once each shipment is received. MKS PAMP SA will put in place a process led by the ESG team that estimates monthly the overall and per kg GHG footprint for precious metals input and compare it to targets. Adjustments will be sought to address excesses. When that process is in place, the effective vs. targets figures will be reported to strategic teams within MKS PAMP SA on a quarterly basis.

**Long-term focus:** MKS PAMP SA is committed to providing the most stable sourcing balance ahead of 2030. It is primordial to MKS PAMP SA that GHG emission reduction occurs across mining and recycling suppliers.

- **Adjusting our relationship based on supplier performance.** MKS PAMP SA will collaborate with its mining partners to ensure GHG reductions in their activities and will offer varying financial incentives to sources depending on their reduction performance.
- **Increase recycled materials.** GHG emission reduction plans at mining sites take time to implement. As such, MKS PAMP SA commits to making choices in the balance of the overall mix (mined vs. recycled) of our general feed which is used to produce the Carbon Neutral bars. MKS PAMP SA intends to maximize secondary recycled materials when mines have not

yet adopted actions to ensure necessary GHG emission reduction in their activities.

- **Improve our refining capacity and sourcing of recycled materials.** Improving our refining capacity and sourcing of recycled materials. MKS PAMP SA plans to expand its refining process to include infrastructure and technology better suited to processing recycled materials, increasing its capacity for recycled sources. This strategy aims to provide with the capabilities to onboarding a greater number of recycled sources.

## 2. Client-relation documents

MKS PAMP SA starts working with clients only after the compliance department approves the clients' onboarding process. To ensure that new clients' emission reduction pathways align with MKS PAMP SA strategy, we will require mining clients to disclose their GHG reduction ambition during this process. Accordingly, we will not take on new mining clients who do not present any pathway for reduction. For existing clients, MKS PAMP SA will revise their refining contract to ensure disclosure of their GHG emissions and allow MKS PAMP SA to act accordingly.

**Short-term focus:** Amend existing refining contract within mining sources. MKS PAMP SA includes a clause that requires clients to disclose their names to MKS PAMP SA and Scope 1, 2 and 3 GHG current and prospective data only for our internal evaluation purpose by 3rd party consultants or auditors mandated by MKS PAMP SA and bound by strict confidentiality clauses. This information will not be disclosed to any other external party, without the consent of the client.

**Medium-term focus:** Incorporate carbon measurement and reduction requirements in clients' onboarding forms and compliance reviews. MKS PAMP SA will ensure clients disclose their GHG data, intention to reduce carbon emissions, ambitions, and action plans. Clients will be reviewed and onboarded based on their commitment to GHG reductions and their capacity to act.

**Long-term focus:** Formalize clients' carbon reduction targets. MKS PAMP SA plans to set, in their contractual agreements, formal carbon reduction targets in partnership with our clients, reinforcing our mutual commitment to sustainability.

## 3. Governance and strategy

MKS PAMP SA sales team is the primary interface with our precious metal supplier. They meet with suppliers regularly (including through on-site visits) and have the most in-depth understanding of the applicability of GHG emissions reduction targets. MKS PAMP SA

	<p>intends to adapt its governance documents (bylaws) to ensure that its sales strategy includes GHG emissions consideration while engaging with current precious metal suppliers and target new suppliers.</p> <p><b>Short-term focus:</b></p> <ul style="list-style-type: none"> <li>• <b>Embed ESG considerations into our corporate decision-making process.</b> MKS PAMP SA has modified the objectives and the duties of the company purpose to mention the necessity for it to strive for a material positive impact on society and the environment. In line with the Swiss Board Alliance 2030 initiative, these amendments have allowed for greater internal enforceability and a clear message to all our stakeholders on our GHG reduction commitments.</li> <li>• <b>Conduct market analysis.</b> MKS PAMP SA will analyse mines based on their GHG emissions and will focus on starting or increasing working relationships with those who emit less GHG or have plans to reduce their GHG emissions in the coming years.</li> </ul> <p><b>Medium-term focus:</b></p> <ul style="list-style-type: none"> <li>• <b>Meet with precious metals suppliers regularly.</b> MKS PAMP SA will meet with mines regularly and allocate a part of their plan to GHG emission reduction. The aim would be to: <ul style="list-style-type: none"> <li>○ Sensitize mines with MKS PAMP SA reduction actions.</li> <li>○ Acquire firsthand yearly carbon emission data from our mining sources.</li> <li>○ To collaborate with the mine to set a pathway for GHG reduction (MKS PAMP SA would then include this pathway in refining contracts).</li> </ul> </li> <li>• <b>Incorporate GHG reduction metrics into budgeting, KPIs, and risk management</b> to anchor sustainability within our core business strategies and decision-making processes. Starting in FY26, we will commit to TCFD disclosures and embed GHG emissions considerations into the budgets and KPIs of all departments.</li> </ul> <p><b>Long-term focus:</b> Onboard new clients. MKS PAMP SA will work towards establishing business relationships with new clients that have GHG emissions in line with our GHG emissions goals.</p>
<p>The offset strategy to be adopted for residual emissions</p>	<p>Last year 22-23, we sold:</p> <ul style="list-style-type: none"> <li>- 25kg of A. ZAUCB00211 – 999.9 Gold Carbon Neutral Kilobar (Carbon Neutral), which emitted 72 tCO<sub>2</sub>e to be offset.</li> <li>- 142.65 kg of C. ZAULB00117- Gold 999.9 - 400 oz Large Bar (Carbon Neutral), which emitted 408 tCO<sub>2</sub>e to be offset.</li> <li>- 2,524.17 kg of D. ZAULB00121 – Gold 995+ - 400 oz Large Bar (LBMA - Carbon Neutral), which emitted 7,199 tCO<sub>2</sub>e to be offset.</li> </ul> <p>For the New product certification, we estimate to sell in 23-24:</p>

- 25kg of B. ZAUCB00216– 995.0 Gold 1000g Bar (Carbon Neutral), which will emit 72 tCO2e to be offset.
- 60kg of E. ZAULB00122 - Gold 995+ - 400 oz Large Bar (SWISS - Carbon Neutral), which will emit 172 tCO2e to be offset.

These estimates are based on actual sales.

In 22-23, we bought and retired 54,625 credits to offset 54,625 tCO2e for a count of 20t total production of A, C and D.

We used 7,679 credits offset for last year products, including :

- 409 credits out of the 54,625 credits.
- 7,035 credits of afforestation brought during the year and
- 235 credits of afforestation out of the 4367 bought in December 2023 for the reconciliation.

We allocate 244 credits of the 54,625 credits retired last year, for the predictive sales of the new certified products for a total of 7,923 credits needed for both reconciliation and new certification. We still have 54,216 credits of avoidance and 4,132 credits of afforestation unused retired offset credits from last year estimation and last estimated reconciliation in December 2023.

*See Annex 3 for the nature of the offsets and number of credits.*

# Annex of Qualifying Explanatory Statement

## Annex 1: Greenhouse gas emissions summary

### A1.1 Carbon footprint details

#### Reconciliation

Product	Stock Keeping Unit	Geographic Area	Total Net kgCO <sub>2</sub> e not rounded	kgCO <sub>2</sub> per Functional Unit not rounded	kgCO <sub>2</sub> per Functional Unit rounded	Functional Unit
Gold Bars	ZAUCB00211- 999.9 Gold Carbon Neutral Kilobar	Global	71,325	2,853	2,900	Per kg (1 Kilobar)
	ZAULB00117 - Gold 999.9 - 400 oz Large Bar (Carbon Neutral)		7,605,783	2,852	2,900	
	ZAULB00121 – Gold 995+ - 400 oz Large Bar (LBMA - Carbon Neutral)					

#### New Certification

Product	Stock Keeping Unit	Geographic Area	Total Net kgCO <sub>2</sub> e not rounded	kgCO <sub>2</sub> per Functional Unit not rounded	kgCO <sub>2</sub> per Functional Unit rounded	Functional Unit
Gold Bars	ZAUCB00216 – 995.0 Gold 1000g Bar (Carbon Neutral)	Global	72,000.00	2,853	2,900	Per kg (1 Kilobar)
	ZAULB00122 - Gold 995+ - 400 oz Large Bar (SWISS - Carbon Neutral)		172,000.00	2,852	2,900	

## A1.2 Methodology overview

Requirement	Information Relating to the Carbon Neutral Declaration
<p><b>Boundary of the product</b></p>	<p>MKS PAMP SA is a provider of financial and physical trading services, and precious metals refinery based in Switzerland and member of the MKS PAMP GROUP. The products are MKS PAMP SA Gold bars (1kg and 12.5kg) and are part of a range of precious metal cast bars produced at MKS PAMP SA. The 1kg and 12.5 kg gold bars are manufactured at the MKS PAMP SA refinery in Ticino, Switzerland to the highest industry standards. These bars are primarily used by clients for investment purposes and are sold to banks, financial institutions, governments, and state mints worldwide.</p>
<p><b>Boundary of carbon footprint</b> (the greenhouse gas emissions system considered)</p>	<p>Carbon Trust Assurance Limited certified that MKS PAMP SA has calculated the carbon footprint representing all gold bars Cradle-to Grave Business-to-Consumer and marketed globally in accordance with PAS 2060:2014.</p> <p>MKS PAMP SA gold bars are finished products that are produced at MKS PAMP SA refinery in Ticino, Switzerland and shipped to customers globally. The bullion bars are sold through our sales teams based in our MKS PAMP SA group offices.</p> <p>The cradle-to-grave product carbon footprint includes all emissions from raw material extraction, value chain logistics (up and downstream distribution), manufacturing, packaging, and storage from the sourcing site to MKS PAMP SA refinery to the end-of-life storage of the product. It also includes Land Use Change and Biogenic Emissions further information on each stage is listed below:</p> <p><b>Raw materials</b></p> <p>Gold inputs come from both virgin and recycled sources. The short-term mix of both being dependent on market fluctuation regarding the pricing of the material and availability, and the end consumer's demand. The carbon neutral product is based on MKS PAMP SA general feed of sources from the baseline year 2020 and includes approximately 50% mined and 50% recycled sources. Data is based on a 3 year rolling average as to balance fluctuating markets. Land use change calculation tool follows the 2019 IPCC Guidelines for National Greenhouse Gas Inventories. Equations and default constants used in the methodology are revised for specific land and biomes.</p> <p><b>Inbound Transportation</b></p> <p>Raw materials are systematically transported from suppliers based globally to MKS PAMP SA's manufacturing facility in Ticino, Switzerland. This by air or sea and road.</p>

	<p><b>Manufacturing</b></p> <p>Once the raw material is received it is wight analysed for purity and to make sure that its composition follows correct norms It then passes through the refinery and foundry, and the banking to produced bouillon products. For manufacturing, electricity was the main energy source and 100% of the electricity was derived from hydroelectric power. Other energy sources used at the plant were natural gas and propane.</p> <p><b>Packaging</b></p> <p>Packaging is carried out as MKS PAMP SA's facility. 1kg gold bars are individually packaged in protective plastic rolls with a paper certificate each. 25 bars are packaged in one plastic box for shipping. 12.5kg bars are packaged in wooden pallets, each containing about 500kg of gold.</p> <p><b>Downstream distribution</b></p> <p>Finished products are transported by road from MKS PAMP SA's refinery to Zurich airport or to the final customers in Switzerland. For the 1kg gold bar, the products are flown to France, India, Jordan, Saudi Arabia, Turkey, United Arab Emirates and United States of America. From here, the products are transported to the end customer, by air and/or road. For the large bars, the products remain in Switzerland.</p> <p><b>End-of-life</b></p> <p>Clients traditionally keep purchased gold bars in vaulting facilities. For the gold bars, it is assumed 100% of the metal is recycled. It is only the packaging that would be dispose of.</p>
<b>Functional unit</b>	Per kg (1 Kilobar)



### A1.3 Lifecycle Overview

Life cycle stage	Description	gCO2e per functional unit per life cycle stage	Excluded emissions & Justification	Primary data sources	Secondary data sources	Data quality and uncertainties
Raw Materials	Gold, other inputs and packaging	Scope 3 Category 1 and 2: 2844 kgCO2e/kg  LUC: 134 kgCO2/kg	N/A	The total mass of the raw material inputs for each footprinted product over the reporting year. Type of provenance (mined vs recycled), amount in gr and in oz, sourced from the supplier, weighted coefficient, origin of the source, and when available emission intensity.	<p>The emission factors used for the gold were calculated using the EU Product Environmental Footprint Circular Footprint Formula (PEF CFF). The virgin emission factor for gold was calculated for specific suppliers provided by MKS PAMP. Recycled emission factors for gold were taken from literature and averaged.</p> <p>For other chemical inputs, emission factors were taken from the FPX v4.7 database, BEIS 2022 and EcolInvent 3.9.1. In the cases when the emission factors were</p>	<p><u>Raw Materials</u>  <b>Activity Data Quality Indicator:</b> Good</p> <p><b>Emission Factor Data Quality Indicator:</b> Medium</p> <p><b>Application Data Quality Indicator:</b> Medium</p> <p><u>Land Use Change</u>  <b>Activity Data Quality Indicator:</b> Medium</p> <p><b>Emission Factor Data Quality Indicator:</b> Medium</p> <p><b>Application Data Quality Indicator:</b> Medium</p> <p><u>Packaging</u>  <b>Activity Data Quality Indicator:</b> Good</p> <p><b>Emission Factor Data Quality Indicator:</b> Good</p>

					not available in either database, an emission factor of a similar chemical was applied from Ecolnvent.	<b>Application Data Quality Indicator: Good</b>
Inbound transport	Transport of raw materials from supplier to MKS PAMP SA	Scope 3 Category 4: 7.3 kgCO2e/kg	N/A	Suppliers' location, the distance and mode of transport (air, sea, road), and the distance used by each of the mode of transport.	Emission factors were applied to these activity data which derive from Carbon Trust FPX v4.7 transportation calculator.	N/A
Manufacturing	Fuels (Gas, Propane), Electricity, and waste	Scope 1, Scope 2, Scope 3 Category 5: 0.38 kgCO2/kg for large bars  0.44 kgCO2/kg for kilobars	N/A	Based on invoice of suppliers of MKS PAMP SA. Electricity: MWh / year for electricity Natural gas and propane: m3 / year for each process step. Waste: data in percentage of mass of product (kg) is waste per year.	Electricity and fuels: The full lifecycle emission factor for hydroelectric power was taken from IEA 2022. Emission factors from BEIS 2022 were used for natural gas and propane. For each process step a specific amount of kgCO2e emissions were associated with them, namely for example the first	<b>Activity Data Quality Indicator: Good</b>  <b>Emission Factor Data Quality Indicator: Good</b>  <b>Application Data Quality Indicator: Good</b>

					melting or the anode casting. Waste: BEIS 2022 was used for waste treatment emission factors.	
Downstream Distribution	Transport of Gold Bars from MKS PAMP SA to global markets	Scope 3 Category 9: 0.05 kgCO2/kg for large bars  1.18 kgCO2/kg for kilobars	N/A	Locations (country) the product was transported to, the distance and mode of transport (air, sea, road), and the distance used by each of the mode of transport.	Emission factors were applied to these activity data which derive from Carbon Trust FPX v4.7 transportation calculator.	<b>Activity Data Quality Indicator:</b> Good  <b>Emission Factor Data Quality Indicator:</b> Good  <b>Application Data Quality Indicator:</b> Good
Use Phase	N/A	Scope 3 Category 11 and 13: 0 kgCO2/kg	Not Applicable, no energy associated with use	N/A	N/A	N/A
End of life	Disposal of Gold and Packaging	Scope 3 Category 12: < 0.01 kgCO2/kg	Gold, as it is considered infinitely recycled.	Packaging: End-of-Life profile for packaging was calculated using BEIS 2022 disposal emission factors and the disposal method percentages of the different	Packaging: These masses were then scaled up to account for the total production output for each product. Emission factors applied to these packaging materials came from the	<b>Activity Data Quality Indicator:</b> Medium  <b>Emission Factor Data Quality Indicator:</b> Medium  <b>Application Data Quality Indicator:</b> Medium

				countries of the sold products.	Carbon Trust's FPX v4.7 database.	
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#### A1.4 Geographical Areas of Emissions Overview:

##### Large bars

ZAULB00117 - Gold 999.9 - 400 oz Large Bar (Carbon Neutral)

ZAULB00121 – Gold 995+ - 400 oz Large Bar (LBMA - Carbon Neutral)

ZAULB00122 - Gold 995+ - 400 oz Large Bar (SWISS - Carbon Neutral)

Geographical Area	Relevant Emissions				
	Upstream transport	Raw Materials	Manufacturing (Utilities, Waste & Packaging)	Downstream Distribution	End of life
Global	28,511 kgCO2e	11,111,308 kgCO2e	1,624 kgCO2e	201 kgCO2e	0.09 kgCO2e

##### 1kg bars

ZAUCB00211 – 999.9 Gold Carbon Neutral Kilobar

ZAUCB00216– 995.0 Gold 1000g Bar (Carbon Neutral)

Geographical Area	Relevant Emissions				
	Upstream transport	Raw Materials	Manufacturing (Utilities, Waste & Packaging)	Downstream Distribution	End of life
Global	870,270 kgCO2e	339,147,126 kgCO2e	60,208 kgCO2e	140,309 kgCO2e	0.25 kgCO2e



## Annex 3: Offsets

The below information relates to the compensation of residual emissions (i.e. offsetting):

The volume of emissions reduced or sequestered via carbon offsetting corresponds to the residual emissions of the products in question. As per the requirements of PAS2060, it has been confirmed the offsets have been retired on a public registry to avoid double accounting. The internal process for ensuring there is no double accounting of offsets is as follows:

The internal process for ensuring there is no double accounting of offsets is as follows: MKS PAMP SA has designated an officer within the ESG team to oversee that all purchased offsets are correctly accounted for. MKS PAMP SA has set up a manual accounting system (in line with its financial accounting system) to track offset allocation supported by our data system (Power Bi). Once offsets are retired, they are assigned to the corresponding SKU within the system, MKS PAMP SA calculates the total amount of offsets available per product. After every purchase of a Carbon Neutral Gold Bar, the ESG officer will make a report to the product management team with the amount (in kg) of product sold, the associated carbon offsets, and the remaining amount of Carbon Neutral gold and offsets available. Our offsetting team, sales team, and the head of ESG will then control these amounts for accuracy. The offset selected are from the projects listed below. Details on which project has been used to offset the GHG emission of the product is described on the QR code associated with the specific product.

Project name	Country	Project type	Standard	Type of credits	Total credits	Generation period	Retirement date	Reference No. & link to registry	Offset volume (tCO <sub>2</sub> e)	Offset Price	Justification for choice of offset
<a href="#"><u>SOUBRE HYDROPOWER PROJECT</u></a>	Ivory Coast	Energy industries (renewable/non-renewable sources)	VCS	Hydro	653 were used out of 18 000 credits retired from the previous QES.	2019-2020	July 5 <sup>th</sup> 2022	<a href="https://registry.terra.org/">https://registry.terra.org/</a> Reference: 1522	653	below \$10/t CO <sub>2</sub>	Based on its global footprint, MKS PAMP SA decided to focus on avoidance projects. Carbon avoidance projects contribute to climate action by preventing carbon that would have been released into the atmosphere. MKS PAMP SA selected projects that generate renewable energy with three different technologies in three different geographies.

											<p>Identifying offset projects had three key criteria for MKS PAMP SA</p> <ol style="list-style-type: none"> <li>1) the project had to leverage the power of technology.</li> <li>2) the project had to be based in a country where it either operates or sources from.</li> <li>3) be in line with its corporate values.</li> </ol>
<p><a href="#"><u>Afforestation of degraded grasslands in Vichada, Colombia</u></a></p>	Colombia	Agriculture Forestry and Other Land Use	VCS CCB	Afforestation	7035	2020	<p>23/03/23: 1365  21/03/23: 137  4/4/2023: 5463  1/3/23: 70</p>	<p><a href="https://registry.terra.org/Reference:2512">https://registry.terra.org/Reference:2512</a>  <a href="https://registry.terra.org/mymodule/report/CertificateInfo.asp?rhid=196193">https://registry.terra.org/mymodule/report/CertificateInfo.asp?rhid=196193</a>  <a href="https://registry.terra.org/mymodule/report/CertificateInfo.asp?rhid=197664">https://registry.terra.org/mymodule/report/CertificateInfo.asp?rhid=197664</a>  <a href="https://registry.terra.org/mymodule/report">https://registry.terra.org/mymodule/report</a></p>	7035	\$18/t Co2	<p>Based on its global footprint, MKS PAMP SA decided to focus on avoidance projects. Carbon avoidance projects contribute to climate action by preventing carbon that would have been released into the atmosphere. MKS PAMP SA selected projects that generate renewable energy: with three different technologies in three different geographies.</p> <p>Identifying offset projects had three key criteria for MKS PAMP SA</p> <ol style="list-style-type: none"> <li>1) the project had to leverage the power of technology</li> </ol>

								<a href="#">t/CertificateInfo.asp?rhid=197907</a>			<p>2) the project had to be based in a country where it either operates or sources from</p> <p>3) be in line with its corporate values.</p>
<a href="#">Afforestation of degraded grasslands in Vichada, Colombia</a>	Colombia	Agriculture Forestry and Other Land Use	VCS CCB	Afforestation	235 used out of 4367	2020	December 2023	<a href="#">Verra Registry</a> Reference: 2512	235	\$18/t Co2	<p>Based on its global footprint, MKS PAMP SA decided to focus on avoidance projects. Carbon avoidance projects contribute to climate action by preventing carbon that would have been released into the atmosphere. MKS PAMP SA selected projects that generate renewable energy: with three different technologies in three different geographies.</p> <p>Identifying offset projects had three key criteria for MKS PAMP SA</p> <ol style="list-style-type: none"> <li>1) the project had to leverage the power of technology</li> <li>2) the project had to be based in a country where it either operates or sources from</li> <li>3) be in line with its corporate values.</li> </ol>





## Annex 4: Independent third-party assurance



### Carbon Neutral Label

#### MKS PAMP SA

has achieved carbon neutrality and is committed to on-going carbon neutrality of the total carbon footprint of its

#### Gold Large Bars and 1kg Gold Bars

Carbon Trust Assurance has certified that this project has met all of the requirements for using the Carbon Trust Carbon Neutral Label.



A full description of the scope of certification and a detailed list of certified results can be found in the associated Certification Letter CERT-13618.

Valid from: 1<sup>st</sup> July 2023

Valid Until: 30<sup>th</sup> June 2024

for and on behalf of Carbon Trust Assurance Ltd,

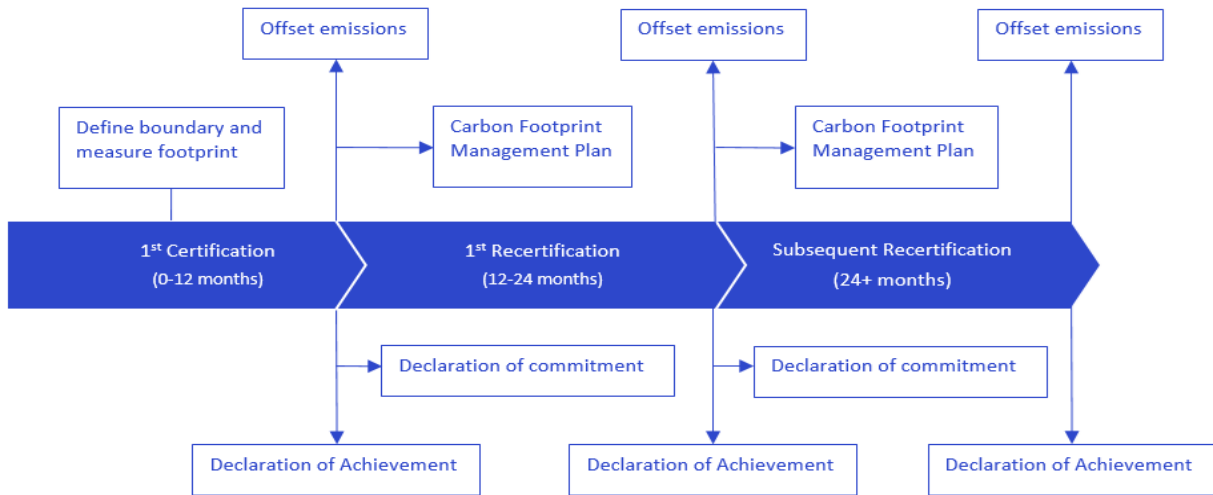
A handwritten signature in black ink, appearing to read "M Hockaday".

Martin Hockaday,  
Head of Assurance

# Annex 5: Additional supporting information for interested parties

**Figure 1. PAS 2060 certification process**

Source: Carbon Trust. Adapted from "BSI - PAS 2060:2014: Specification for the demonstration of carbon neutrality: Figure 1 – Illustration of the cyclical process for demonstrating carbon neutrality, taking into account permitted baseline period exceptions". [Simplified version]



**Figure 2. Organisational carbon footprinting**

Source: Greenhouse Gas Protocol: <http://ghgprotocol.org/>

