MOBRUK

Mo-BRUK Carbon Footprint Calculation Report

for 2022

TAILORS GROUP

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THE PURPOSE OF THIS REPORT

Carbon footprint is the total sum of greenhouse gas emissions caused directly or indirectly by a given person, organization, event or product.

It includes emissions of carbon dioxide, as well as methane, nitrous oxide and other greenhouse gases, which are expressed in CO_2 equivalent.

The Mo-BRUK Carbon Footprint Calculation Report has been prepared in order to:

- manage greenhouse gas emissions and identify reduction opportunities,
- provide transparent communication of greenhouse gas emissions to stakeholders.

VERIFICATION OF THE REPORT

The following inventory has not been verified by an accredited third party.

MANDATORY INFORMATION

The inventory has not excluded any facilities, operations or emissions.

Reporting period covered by this inventory	
Beginning of the reporting period	1 January 2022
End of the reporting period	31 December 2022

ORGANIZATIONAL BOUNDARIES

Select each consolidation method used by the organization for reporting purposes. If the organization reports on the basis of more than one consolidation method, please attach separate calculations for each consolidation method.	☐ Equity stake ☐ Financial control ☒ Operational control
Reporting period covered by this inventory	
Are Scope 3 emissions included in the inventory?	☐ YES ☒ NO

ABOUT THE Mo-BRUK GROUP

The Group has been active in the waste management sector since 1996. The business activity of Mo-BRUK S.A. is focused on three areas: waste incineration, production of RDF and solidification and stabilization of waste. The core business of the subsidiary Raf-Ekologia Sp. z o.o. is thermal disposal of industrial and medical waste.

The Group has five facilities located in Southern Poland: in Niecew, Karsy, Skarbimierz, Wałbrzych and Jedlicze.

> *The calculation of the carbon footprint is a very important element in the conscious management of the organization's carbon emissions.*
>
> *It is the first step in reducing costs, improving transparency to stakeholders, and reducing the organization's carbon footprint.*

Ewa Solarz
Head of ESG
TAILORS Group

CONTEXT OF CARBON FOOTPRINT CALCULATIONS

Paris Agreement

The Paris Agreement, which entered into force in 2016, is an international climate agreement under the auspices of the United Nations Framework Convention on Climate Change (UNFCCC). The goal of the agreement is to limit global warming to less than 2 degrees Celsius above pre-industrial levels, while aiming to limit temperature increase to 1.5 degrees Celsius.

The calculation and reporting of the emissions of CO_2 (and other greenhouse gases) has several key goals in the context of the Paris Agreement:

- **Monitoring progress:** are countries making progress towards meeting their national commitment targets, and to what extent?
- **Transparency and accountability:** to assess whether countries are meeting their commitments and whether additional measures are needed.
- **Planning:** identification where and how effectively emissions can be reduced
- **Supporting policy decisions** that promote climate change mitigation.
- **Promotion of sustainable development:** identifying opportunities for green economy, such as clean energy technologies, energy efficiency, sustainable farming practices.

Private organizations play a key role in preventing climate change. There are several reasons why they calculate their CO_2 emissions:

- environmental accountability,
- compliance,
- business risks and opportunities,
- energy management and efficiency,
- reputation and stakeholder relations.

IPCC

The Intergovernmental Panel on Climate Change is an organization created by the United Nations and the World Meteorological Organization (WMO) in 1988.

The IPCC is responsible for assessing scientific information on climate change, its impacts, and potential adaptation and mitigation strategies.

The IPCC has developed a number of widely used methodologies and tools for calculating carbon footprint. The IPCC Greenhouse Gas Inventory Guidance Reports, which provide detailed methodologies for calculating CO_2 and other greenhouse gas emissions from various sources, are particularly important.

A variety of carbon footprint reporting initiatives, such as the Greenhouse Gas Protocol (GHG Protocol), use IPCC methodologies and data.

GHG PROTOCOL

The GHG Protocol is the international standard for calculating and reporting greenhouse gas emissions.

The GHG Protocol specifies how to measure and report greenhouse gas emissions in a transparent and consistent manner.
Specifically, the Protocol provides rules for:

- defining the boundaries of an organization's responsibility for emissions, which may include direct emissions from activities controlled by the organization (Scope 1), indirect emissions from purchased energy (Scope 2), and other indirect emissions that result from the organization's activities but are controlled by other entities (Scope 3),
- selecting and applying emission factors to calculate emissions from different sources,
- developing and implementing an emissions management plan, which entails setting emission reduction targets and tracking progress towards these targets.

The GHG Protocol is an important tool for private and public organizations that want to understand and manage their impact on climate change.

EMISSION INFORMATION

Emissions	Total	CO_2	CH_4	N_2O	HFC	PFC	SF_6
	[tCO_2e]	[t]	[t]	[t]	[t]	[t]	[t]
Scope 1	28,307.706	28,280.915	0.087	0.092	0	0	0
Scope 2 (market)	5,933.583	5,933.583	0	0	0	0	0
Scope 2 (location)	4,391.141	4,391.141	0	0	0	0	0
Scope 3 (option)	-	-	-	-	-	-	-

Direct CO_2 emissions from biomass combustion [tCO_2].	0

BASE YEAR

Base year	2022
Explanation of the organization's policy for recalculating base year emissions	The organization's policy for recalculating base year emissions assumes a situation, in which projected changes in emissions volume grow by more than 5%.
Context for significant changes in emissions that trigger recalculation of base year emissions	The significant changes in emissions that trigger recalculation of base year emissions may include: ▪ Changes in the organization's structure (purchase or sale of shares, demerger) ▪ Outsourcing or insourcing of activities that generate emissions ▪ Changes in the carbon footprint calculation methodology, increases in accuracy of emission factors, or increases in accuracy of activities ▪ Improvement of the accuracy of the emission factor (mainly in the context of the energy carbon footprint for calculations based on market data) ▪ Discovery of significant errors in the calculations

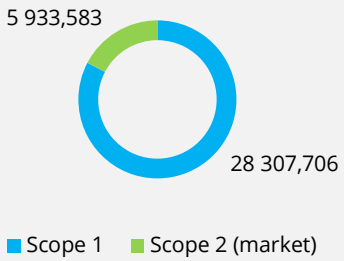
Base year emissions (disclosures compliant with GRI Standards 305-1 and 305-2)

Emissions	Total	CO_2	CH_4	N_2O	HFC	PFC	SF_6
	[tCO_2e]	[t]	[t]	[t]	[t]	[t]	[t]
Scope 1	28,307.706	28,280.915	0.087	0.092	0	0	0
Scope 2 (market)	5,933.583	5,933.583	0	0	0	0	0
Scope 2 (location)	4,391.141	4,391.141	0	0	0	0	0
Scope 3 (option)	-	-	-	-	-	-	-

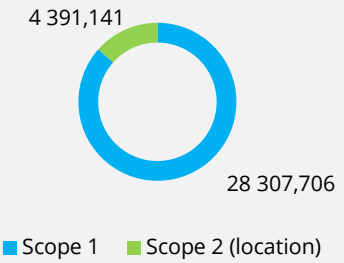
METHODOLOGIES AND EMISSION FACTORS

Methodologies used to calculate or measure emissions other than those specified in the GHG Protocol	NOT APPLICABLE

MARKET [tCO_2e]



LOCATION [tCO_2e]



According to the GHG Protocol guidelines, two methods of calculating scope 2 emissions have been recommended:

- market-based (**MARKET**), reflecting emissions from the consumption of energy from a seller selected by the organization,
- location-based (**LOCATION**), which reflects average emissions across the network.

The use of two calculation methods offers a fuller view of emissions and takes into account the suppliers selected by the company

INTENSITY

According to the guidelines anticipated by the CSRD, one of the reported disclosures will be the intensity of greenhouse gas emissions expressed as a ratio of emissions to net sales. The result includes Scope 2 calculated using the market-based method.

140.69 tCO_2e

per PLN 1 million of net revenue

Optional information

ORGANIZATIONAL BOUNDARIES

List of all legal persons or facilities, in which the organization holds equity stakes, financial or operational control	Equity stake %	Does the reporting organization has financial control? (YES/NO)	Does the reporting organization has operational control? (YES/NO)
Karsy	100%	YES	YES
Niecew	100%	YES	YES
Łęka	100%	YES	YES
Skarbimierz	100%	YES	YES
Wałbrzych – Górnicza	100%	YES	YES
Wałbrzych – Moniuszki	100%	YES	YES
Jedlicze	100%	YES	YES

If the reporting company's parent does not report emissions then an organizational scheme that clearly defines relations between the reporting subsidiary and other subsidiaries	NOT APPLICABLE

EMISSION INFORMATION

Emissions broken down by source types [tCO_2e]	
Scope 1: Direct emissions from own/controlled operations	**28,307.71**
a. Direct emissions from combustion processes in stationary facilities	27,110.06
b. Direct emissions from mobile combustion processes	1,197.08
c. Direct emissions from process sources	0.57
d. Direct emissions from fugitive sources	0
e. Direct emissions from agricultural sources	0
Scope 2: Indirect emissions from the use of purchased electricity, steam, heating and cooling (market)	**5,933.58**
a. Indirect emissions from purchased/acquired electricity	5,921.09
b. Indirect emissions from purchased/acquired steam	0
c. Indirect emissions from purchased/acquired heating	12.5
d. Indirect emissions from purchased/acquired cooling	0
Scope 2: Indirect emissions from the use of purchased electricity, steam, heating and cooling (location)	**4,391.14**
a. Indirect emissions from purchased/acquired electricity	4,378.65
b. Indirect emissions from purchased/acquired steam	0
c. Indirect emissions from purchased/acquired heating	12.5
d. Indirect emissions from purchased/acquired cooling	0

Emissions by facility – market method			
Country	Scope 1 [tCO_2e]	Scope 2 (**market**) [tCO_2e]	Scope 3 [tCO_2e]
Karsy	17,980	4,244	-
Niecew	410.92	278.67	-
Łęka	18.83	58.31	-
Skarbimierz	132.21	223.65	-
Wałbrzych–Górnicza	34.04	287.28	-
Wałbrzych–Moniuszki	0	76.94	-
Jedlicze	9,731.7	764.72	-
Total	**28,307.71**	**5,933.58**	-

Emissions by facility – location method			
Country	Scope 1 [tCO_2e]	Scope 2 (**location**) [tCO_2e]	Scope 3 [tCO_2e]
Karsy	17,980	3,138.44	-
Niecew	410.92	206.08	-
Łęka	18.83	43.12	-
Skarbimierz	132.21	165.39	-
Wałbrzych–Górnicza	34.04	212.45	-
Wałbrzych–Moniuszki	0	56.9	-
Jedlicze	9,731.7	568.77	-
Total	**28,307.71**	**4,391.14**	-

Emissions attributable to own generation of electricity, heat or cooling that is sold or transferred to another organization	8,938
Emissions related to the generation of electricity, heat or steam purchased for resale to non-end users	0
GHG emissions not covered by the Kyoto Protocol [tCO_2e]:	12,993
Information on the reasons for emission changes that did not cause recalculation of base year emissions (e.g. changes in processes, improvement of efficiency, facility closures)	NOT APPLICABLE
Data related to greenhouse gas emissions for all years between the base year and the reporting year (including recalculation details and reasons, where appropriate)	NOT APPLICABLE
Appropriate factor efficiency ratios (e.g. emissions per kilowatt hour generated, sales, etc.)	--
Overview of all programs or strategies to manage/reduce greenhouse gas emissions	--

ADDITIONAL INFORMATION

Information on all contractual provisions on risk and obligations related to greenhouse gas emissions	--
An outline of any external assurances and a copy of any statements of verification of reported emissions data, if applicable.	--
Information on the quality of the greenhouse gas inventory (such as information on the sources and level of uncertainty in emission estimates) and a description of the policy applied in order to improve the quality of the inventory.	The calculation of the carbon footprint was based on the recognized factors provided by GHG Protocol and DEFRA, among others. In the course of calculating the carbon footprint, we have found out that data on the emission factor of purchased electricity was not available. If carbon footprint documentation for purchased electricity is not available, data on the residual mix of electricity produced in Poland must be used. Since the residual mix data will not be available until mid-year, the previous year's residual mix data was used for the calculation. If the difference exceeds 5%, the data will be recalculated accordingly. Fugitive emissions data for individual sites and the fleet were also missing. The company required companies providing air conditioning maintenance and repair services to provide the necessary information on sales invoices or in relevant reports. Given the high emission intensity related to thermal waste treatment, the inclusion of refrigerant emissions should not have a significant impact on the overall carbon footprint. For stationary combustion of fuels in the thermal waste treatment process, a reporting factor was assumed for the Karsy plant, which is used for reporting emissions to KOBIZE. For emissions in Jedlicze, we used a factor calculated on the basis of periodic measurements (twice a year) of flue gas emissions from the facility. Actual results may vary due to differences in the composition of feedstock.
Information on greenhouse gas sequestration	--

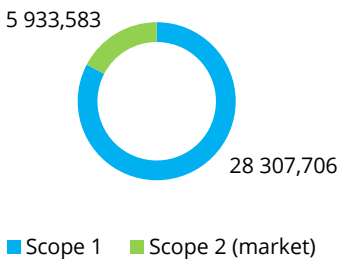
INFORMATION ON OFFSETS

Information on offsets purchased or generated outside of the inventory		
Volume of greenhouse gases [tCO_2e]	Offset project type	Have offsets been verified/certified or approved by an external GHG program (e.g. CDM)?
-	-	-

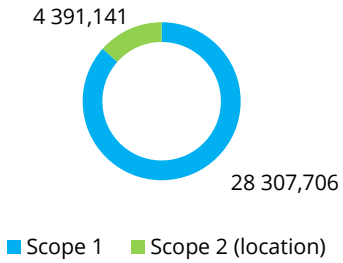
Information on reductions within the inventory that were sold/transferred to a third party as an offset		
Volume of greenhouse gases [tCO_2e]	Offset project type	Have offsets been verified/certified and/or approved by an external GHG program (e.g. CDM)?
-	-	-

The carbon footprint of Mo-BRUK in 2022 in Scope 1 and 2 according to the GHG Protocol - summary

MARKET [tCO_2e]



LOCATION [tCO_2e]



Estimated values comparable to Mo-BRUK's emissions

	SCOPE 1	SCOPE 2 (market)	SCOPE 2 (location)
Mo-BRUK's emissions ...			
Emission level [tCO_2e]	**28,307.71**	**5,933.58**	**4,391.14**
... are equivalent to			
... the number of kilometers of long-range flights in economy class	188,718,040	39,557,220	29,274,273
... the number of airplane laps around the Earth	4,709	987	730
... the number of kilometers driven in a gasoline-fueled car	141,538,530	29,667,915	21,955,705
... the number of trips from Niecew to Warsaw in a gasoline-fueled car	400,959	84,045	62,197
... the number of years of nutrition with a traditional diet	11,323	2,373	1,756
... the number of years of nutrition of all people working for Mo-BRUK (with a traditional diet)	52	11	8
... the number of years of nutrition with a vegan diet	18,872	3,956	2,927
... the number of trees to capture CO_2 emissions generated by Mo-BRUK over 1 year	1,286,714	269,708	199,597
The area of forest needed to capture generated emissions over 1 year [ha]	3,216.78	674.27	498.99
It is a square forest plot with a side length of [km]	5.67	2.60	2.23

Confirmation of accuracy of calculations

I hereby confirm that the calculation of the carbon footprint of Mo-BRUK has been carried out with due care, based on the knowledge and experience of the TAILORS Group and its consultants.

The calculation and the report have been prepared in accordance with the international GHG Protocol standard.

CONTACT

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TAILORS GROUP