

CARBON FOOTPRINT REPORT 2024

The Avenues-Kuwait



Our Commitment to Shared Growth

Mabaneer is a leading real estate developer and partner. We deliver exciting, innovative projects that create value for our shareholders and the communities we operate in and serve.

Since 1999, the Company has been listed in the Kuwait Stock Exchange and is under the Premier Market Index.



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Abbreviation	Term
AC	Air Conditioning
CF	Carbon Footprint
CH ₄	Methane
CO ₂	Carbon Dioxide
EF	Emission Factor
EPA	Environmental Protection Agency
FTE	Full-Time Employee
GHGI	Greenhouse Gas Inventory
GHGs	Greenhouse Gases
GWP	Global Warming Potential
G	Gram
HFCs	Hydrofluorocarbons
ICAO	International Civil Aviation Organization
IPCC	International Panel on Climate Change
IPCC AR6	IPCC Sixth Assessment Report
ISO	International Organization for Standardization
IEA	International Energy Agency
Kg	Kilogram
kWh	Kilowatt-hour
KPIs	Key Performance Indicators
L	Liter
m ²	Squared Meter
m ³	Cubic Meter
MWh	Megawatt-hour

MEW	Ministry of Electricity, Water & Renewable Energy
N ₂ O	Nitrous Oxide
PFCs	Perfluorocarbons
SF ₆	Sulfur Hexafluoride
SI Units	International System of Units
tCO ₂ e	Tons of Carbon Dioxide Equivalent
UNFCCC	United Nations Framework Convention on Climate Change

Terms and Definitions

Term	Definition
Activity Data	A quantitative measure of an organization's activity that results in a GHG emission or removal.
Climate Change	Long-term shifts in temperatures and weather patterns. These shifts may be natural or human-driven activities.
Carbon Dioxide Equivalent (CO ₂ e)	Standardizing all greenhouse gases to reflect the global warming potential relative to carbon dioxide.
Downstream Emissions	Emissions under Scope 3 referring to greenhouse gas emissions that occur after a product leaves the control of the company, such as during its distribution, use, and disposal.
Ecoinvent	A comprehensive database providing life cycle inventory data used to assess the environmental impacts of products and services, including emission factors for Scope 3.
Emission Factor (EF)	A factor allowing GHG emissions to be estimated from a unit of available activity data (e.g., Tons of fuel consumed, etc.) and absolute GHG emissions.
Emissions Intensity	Emissions intensity measures the amount of greenhouse gas emissions generated relative to a specific factor, such as the size of an area or the number of employees.
Fugitive Emissions	Emissions that are not physically controlled but result from the intentional or unintentional releases of GHG.
Greenhouse Gas (GHG)	A gas that absorbs and emits radiant energy within the thermal infrared range, causing the greenhouse effect.
GHG Inventory	List of emission sources and the associated emissions quantified using standardized methods.
Greenhouse Gas Emission	The total mass of a GHG released into the atmosphere over a specified period.
Greenhouse Gas Report	Stand-alone document intended to communicate an organization or project's GHG-related information to its intended users.

Greenhouse Gas Source	Physical unit or process that releases a GHG into the atmosphere.
Inventory Boundary	An imaginary line encompasses the direct and indirect emissions included in the inventory. It results from the chosen organizational and operational boundaries.
IPCC	The Intergovernmental Panel on Climate Change is an intergovernmental body of the United Nations responsible for advancing knowledge on human-induced climate change.
Mobile Combustion	The burning of fuels by transportation devices such as cars and buses.
Operational Boundaries	The operational boundary determines the emissions associated with operations, classification of emissions as direct or indirect and categorizes the different Scopes of GHG emissions.
Organizational Boundaries	Organizational boundaries determine which operations to include or exclude from the carbon footprint calculations of the organization.
Other Indirect Greenhouse Gas Emissions	GHG emissions, other than energy indirect GHG emissions, which are a consequence of an organization's activities, but arise from greenhouse gas sources that are owned or controlled by other organizations.
R-22	Chemically known as Chlorodifluoromethane (CHClF ₂), R-22 is an HCFC refrigerant composed of chlorine, fluorine, carbon, and hydrogen. It is used in air conditioning and commercial refrigeration systems.
R-134a	Chemically known as 1,1,1,2-Tetrafluoroethane (CH ₂ FCF ₃), R-134a is an HFC refrigerant composed of hydrogen, fluorine, and carbon. It is widely used in automotive air conditioning, domestic refrigeration, and some commercial refrigeration applications.
R-410A	It is a blend of two HFC refrigerants: R-32 (Difluoromethane, CH ₂ F ₂) and R-125 (Pentafluoroethane, C ₂ HF ₅). It contains hydrogen, fluorine, and carbon, with no chlorine. R-410A is primarily used in residential and commercial air conditioning systems.

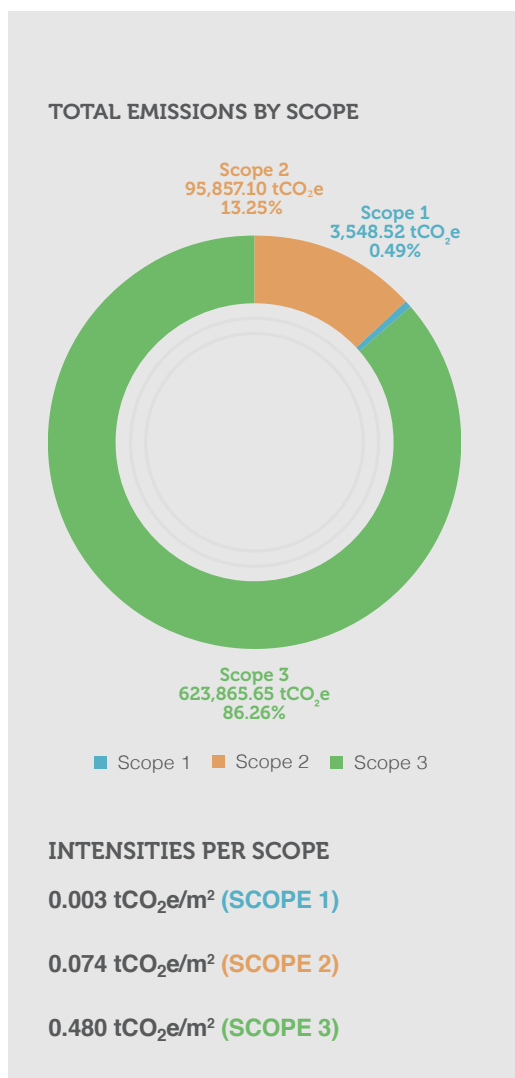
Refrigerant	A refrigerant is a substance or mixture, usually, a fluid, used in a refrigeration cycle.
Scope 1 (Direct Emissions)	A reporting organization's direct greenhouse (GHG) emissions that occur from sources that are controlled or owned by the organization itself.
Scope 2 (Indirect Emissions)	A reporting organization's indirect GHG emissions associated with the purchase of electricity, steam, heat, or cooling
Scope 3 (Indirect Emissions)	A reporting organization's indirect GHG emissions that occur in the value chain, including both upstream and downstream emissions. This encompasses a wide range of activities such as purchased goods and services, business travel, waste disposal, and transportation and distribution.
Upstream Emissions	Emissions that occur before a product reaches the company, including emissions from the extraction, production, and transportation of raw materials.



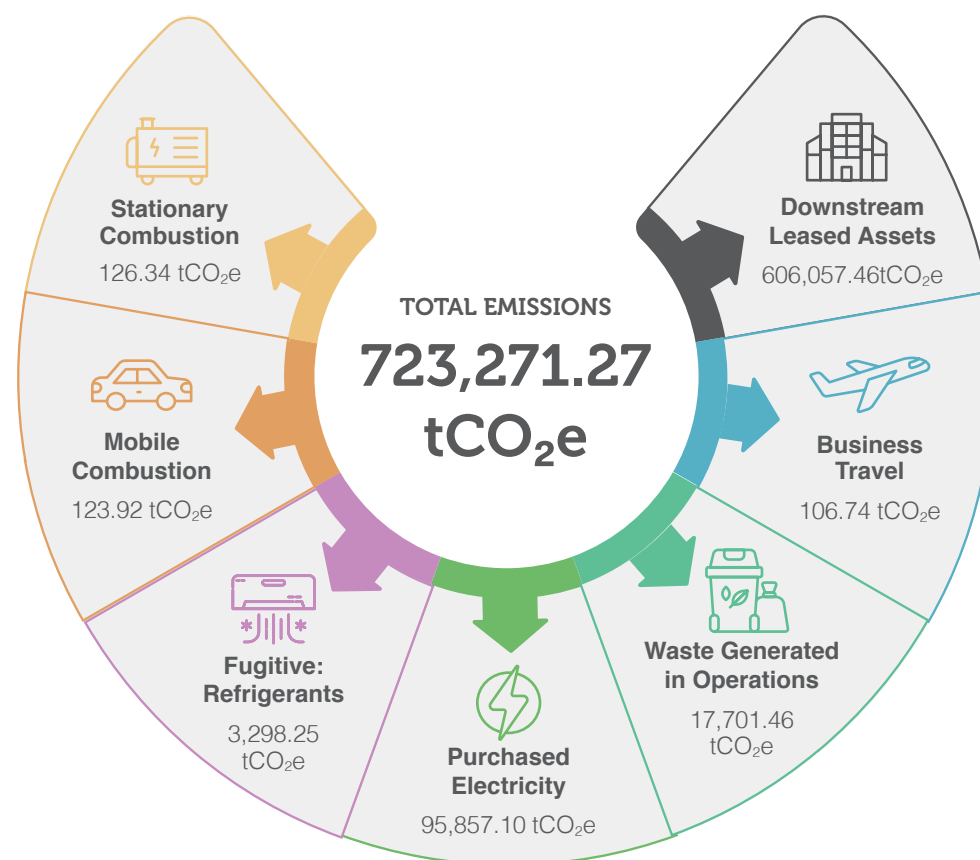
Executive Summary

Mabaneer is a leading real estate developer in Kuwait and the GCC, with a portfolio that includes landmark projects such as The Avenues–Kuwait, Waldorf Astoria Kuwait, Hilton Garden Inn Kuwait, and Aventura Kuwait. This Carbon Footprint (CF) Report presents the greenhouse gas (GHG) emissions associated with The Avenues–Kuwait for the reporting period 1 January to 31 December 2024. The assessment follows internationally recognized standards to ensure transparency, consistency, and credibility in measuring emissions across Scopes 1, 2, and selected Scope 3 categories.

Total emissions for the reporting year amounted to 723,271.27 tCO₂e*. Scope 1 emissions, covering stationary combustion, mobile combustion, and fugitive emissions from refrigerant leakage, represent 0.49% of the footprint. Scope 2 emissions, from purchased electricity, account for 13.25%. Scope 3 emissions, which include waste generated in operations, business travel, and downstream leased assets, represent the largest share at 86.26%. A detailed breakdown by category is presented as follows. The emissions intensities, measured over a total built-up area of 1.3 million m², were 0.003 tCO₂e/m² for Scope 1, 0.074 tCO₂e/m² for Scope 2, and 0.480 tCO₂e/m² for Scope 3.



EMISSIONS BY CATEGORY



*Note: This Carbon Footprint (CF) report was issued after the 2024 Sustainability Report. Due to updates in GHG emissions data, the figures in this report supersede those in the Sustainability Report. Please refer to this CF report for the most updated data.





Section 1

About Mabaneer

Quantification
of the GHG
inventory



Scope of the
Inventory



GHG Results
and Analysis



Data
Quality



Internal
Benchmarking



Strategic
Direction



Appendices



Mabaneer is a leading Kuwaiti real estate development company recognized for its flagship projects that shape the country's commercial, retail, and urban landscape. Founded in 1964, Mabaneer has grown to become one of Kuwait's most influential developers, best known for managing The Avenues-Kuwait, one of the Middle East's largest and most iconic shopping and leisure destinations.

Beyond retail, the company's portfolio spans residential, hospitality, and mixed-use projects that contribute to the country's long-term urban and economic growth. Today, Mabaneer is developing several major projects across Kuwait, the Kingdom of Saudi Arabia, and Bahrain, working with strong strategic partners in each country it operates in.

The success of The Avenues – Kuwait has driven the expansion of "The Avenues" brand into other markets, where each development retains its own distinctive character shaped by local influences. In addition to The Avenues projects, Mabaneer also has several other real estate developments underway across the region.



KUWAIT

The Avenues-Kuwait

Hilton Garden Inn

Waldorf Astoria

Aventura

Souq Sabah

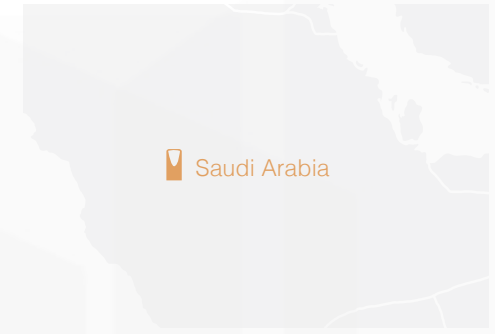
Plage-13



BAHRAIN

The Avenues-Bahrain

Hilton Garden Inn



KSA

The Avenues-Khobar

The Avenues-Riyadh

In line with Kuwait Vision 2035, Mabaneer is committed to integrating environmental sustainability across its operations and projects. This includes enhancing energy efficiency in its developments, improving water stewardship, reducing waste generation, and incorporating green building principles in line with international best practices. With a workforce that supports thousands of tenants, retailers, and visitors daily, Mabaneer's infrastructure and operations are central to its environmental performance and responsibility. Mabaneer's long-term vision is to create developments that balance economic growth with environmental stewardship, contributing to Kuwait's transition toward a more resilient and sustainable urban economy.



The Avenues–Kuwait

Developed and operated by Mabaneer, The Avenues–Kuwait is the country's largest and most visited retail, leisure, and lifestyle destination, spanning 1.3 million m² of built-up area across 12 themed districts. The development sits on 360,000 m² of land, housing over 1,100 stores and a 13,000-vehicle multi-level parking facility. It is also connected to the Hilton Garden Inn (2019) and Waldorf Astoria Kuwait (2022).

The Avenues–Kuwait is the first mall in Kuwait to achieve LEED Silver (O+M) certification and holds a Diamond Ranking under the Ministry of Health's Health Promoting Mall Initiative. It has also received multiple awards for waste management, safety, and community service.

The Avenues–Kuwait drives the company's environmental leadership, with initiatives in energy efficiency, resource optimization, and occupant well-being, supporting Kuwait Vision 2035 and the UN SDGs.



Key Environmental Initiatives and Achievements (as of 2024):



OPERATIONAL PERFORMANCE

- Replaced sliding doors with revolving doors to improve envelope efficiency.
- Retrofitted 95% of back-of-house (BOH) areas with LED lighting.
- Added daylight sensors across all projects.
- Installed motion sensors in BOH corridors and prayer rooms.
- Upgraded BMS controls and optimized HVAC performance.
- Applied the MEW "Tarsheed" schedule to the parking lighting system, saving 357,708 kWh/year (11% of parking use).



WATER STEWARDSHIP

- Smart irrigation systems that adjust watering based on weather and soil conditions.
- Sub-metering to monitor water use across different zones.
- AI-driven irrigation controls and soil sensors to prevent overwatering.
- Real-time monitoring through tenant dashboards to encourage water conservation.
- On-site Reverse Osmosis (RO) plant to recycle water for reuse in AC makeup systems.



WASTE MANAGEMENT AND RECYCLING

- Waste management framework for collection, segregation, recycling, and safe disposal.
- Signed structured agreements with certified waste handlers and recyclers to divert major waste streams from landfills, supporting circular economy goals.
- Set up traceable e-waste collection points in partnership with Tadweer.



Section 2

Quantification Of The GHG Inventory

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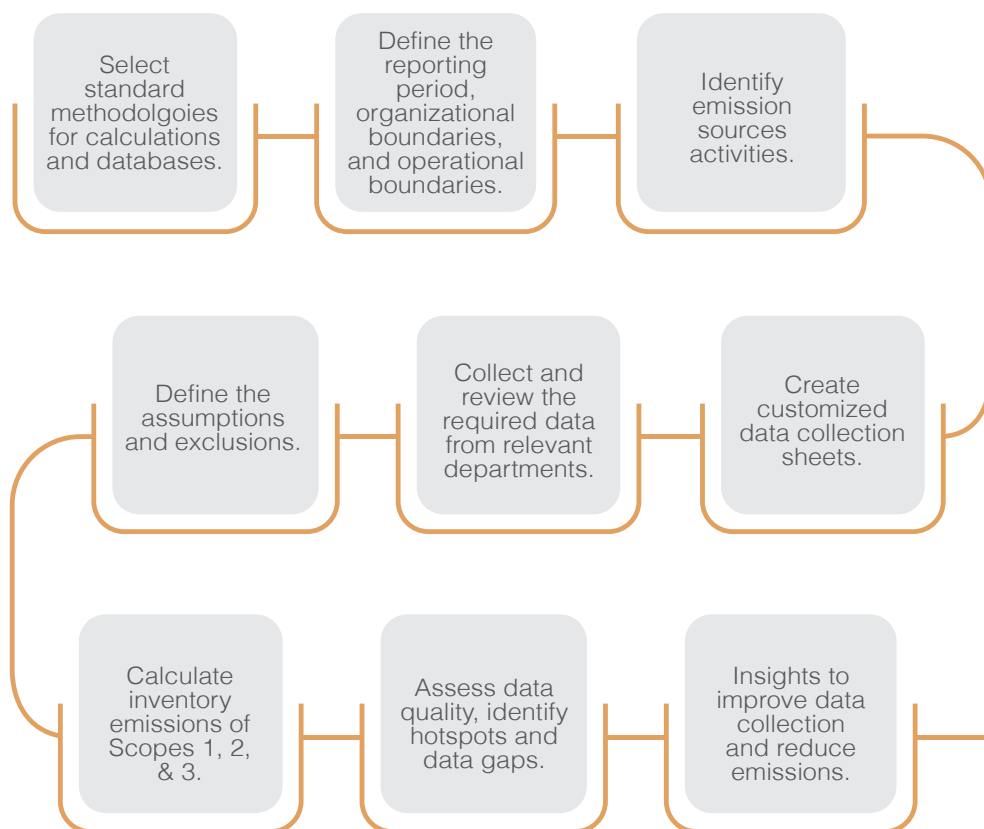
- ▶ CF Assessment Approach
- ▶ Methodology
- ▶ Adopted Standards

This section outlines the approach, standards, and methodology used to quantify greenhouse gas (GHG) emissions for The Avenues–Kuwait in 2024. The inventory covers Scopes 1, 2, and 3, capturing both direct and indirect emissions in line with internationally recognized guidelines and protocols.

CF Assessment Approach

The methodology, illustrated in Figure 1, follows a structured and transparent process from data collection to calculation and reporting, ensuring accuracy, comparability, and alignment with international best practices.

Figure 1 Mabaneer's CF Assessment Approach



Adopted Standards

The 2024 GHG inventory for The Avenues–Kuwait was developed in accordance with leading international standards to ensure accuracy, comparability, and credibility:



The GHG Protocol - Corporate Accounting and Reporting Standard: Developed by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD). This standard provides guidance for defining boundaries, categorizing emissions, and ensuring transparency in corporate GHG reporting.



ISO 14064-1:2018: Specification with guidance at the organizational level for quantification and reporting of GHG emissions and removals.



Intergovernmental Panel on Climate Change (IPCC) Guidelines for National GHG Inventories: EFs and Global Warming Potentials (GWPs) were primarily drawn from the IPCC AR6 and supplemented with local data when relevant.

Methodology

GHG emissions were calculated, applying the following general formula:

$$\text{GHG Emissions (tCO}_2\text{e/year)} = \text{Activity Data (unit of activity/year)} \times \text{Emission Factor (EF)} \times \text{GWP}$$

Where:

- Activity Data refers to measured or estimated quantities such as fuel consumption (liters), electricity use (kWh), refrigerant recharges (kg), or waste generated (tons).
- EFs indicate the amount of GHGs emitted per unit of activity. For this report, EFs were primarily obtained from IPCC, Ecoinvent for Scope 3 categories, and national EFs where applicable.
- GWPs used to standardize all GHGs to CO₂ equivalents, based on values from the IPCC's AR6.

Table 1 GWPs according to IPCC AR6.

GHG	GWP
Carbon Dioxide - CO ₂	1
Methane - CH ₄	29.8
Nitrous Oxide - N ₂ O	273





Section 3

The Inventory

- ▶ Reporting Period
- ▶ Operational Boundaries
- ▶ Organizational Boundaries
- ▶ Exclusions

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Reporting Period

The reporting period covers January 1st to December 31st, 2024.



Future assessments will progressively incorporate additional facilities as data quality and consistency reach the required standards for reliable carbon accounting, ultimately achieving group-wide emissions reporting and establishing a comprehensive baseline for target-setting.

Organizational Boundaries

In the preparation of the GHG inventory, the initial step involves defining the reporting boundaries. In line with the GHG Protocol, these boundaries may be determined through one of three recognized approaches:



Mabaneer applies the operational control approach, whereby GHG emissions are accounted for from activities and processes under its direct management and authority. The 2024 assessment focuses exclusively on The Avenues–Kuwait as the priority baseline for Mabaneer's carbon footprint reporting. This boundary selection was determined based on several key factors: (1) the completeness and reliability of available operational data for this facility, (2) its significance as Mabaneer's flagship and primary operational property, and (3) the maturity of its data collection systems and operational controls, which enable accurate measurement and reporting.

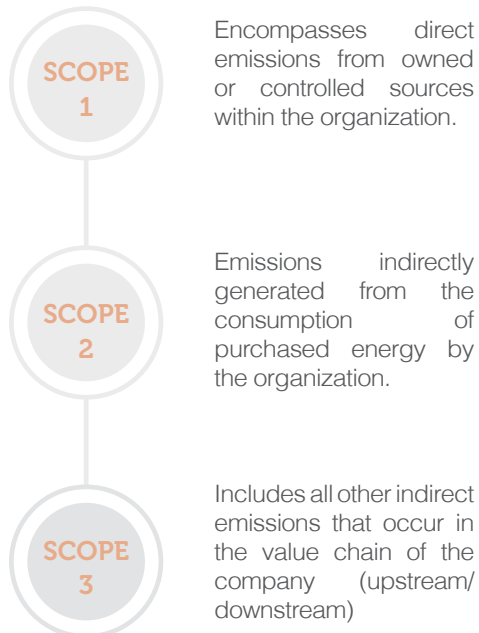
This phased approach allows Mabaneer to establish a robust measurement framework and reliable reporting methodology before expanding the assessment scope. Other Mabaneer properties are excluded from the 2024 assessment while data consolidation processes and reporting systems are being standardized across the portfolio.



Operational Boundaries

Following the establishment of organizational boundaries, the next step is to define and categorize emissions according to the selected operational boundaries. Emissions are classified into two primary categories: direct and indirect. For consistency and transparency, GHG accounting and reporting are organized into three distinct "Scopes," which differentiate between direct and indirect sources while ensuring alignment with organizational structures, climate policies, and business objectives.

The breakdown below presents all the emission categories and what is included in this assessment. Mabaneer will work on incorporating additional applicable categories in future assessments of the Avenues-Kuwait.



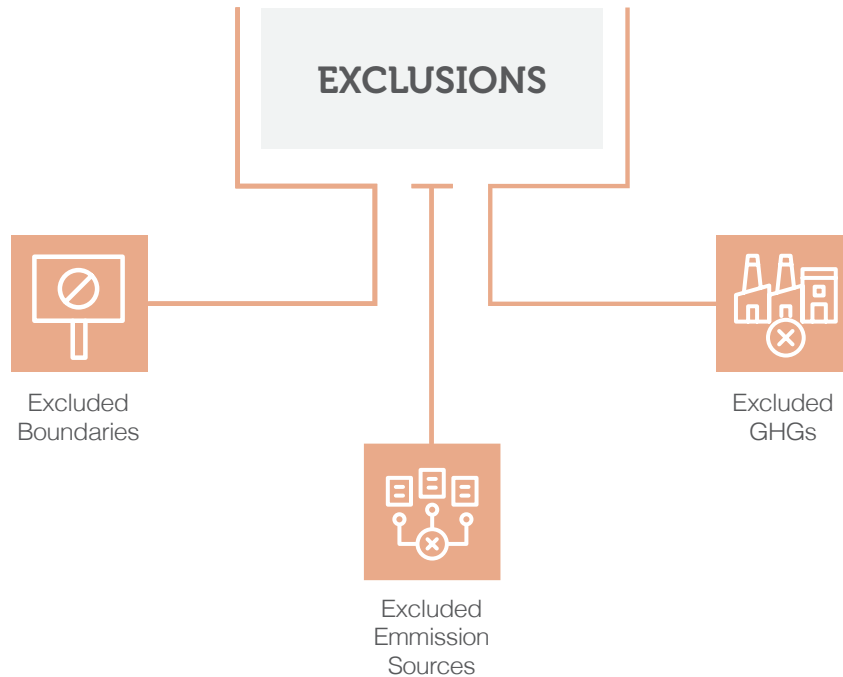
Applicable, Included
Applicable, Not Included
Inapplicable, Not Included



Exclusions

To maintain the accuracy and completeness of the GHG inventory, it is important to identify and disclose any exclusions considered in the assessment.

These exclusions fall into three main categories:



Exclusions in this assessment include boundaries, emission sources, and GHGs. The assessment covers The Avenues–Kuwait only and does not extend to other Mabanee boundaries. Future assessments will aim to expand the coverage to include additional Mabanee projects — such as Avenues Bahrain and under-construction developments like Aventura, Souk Sabah, Avenues Khobar, and Avenues Riyadh — to provide a group-wide representation of emissions. Excluded sources under Scope 1 include fertilizers and fire suppressants due to data unavailability; however, these will be included in future assessments once data becomes available. Excluded GHGs, namely SF₆ and PFCs, were omitted as they are not relevant to The Avenues–Kuwait’s operations.





Section 4

GHG Results and Analysis

- ▶ Total GHG Emissions
- ▶ Scope 1: Direct Emissions
- ▶ Scope 2: Indirect Emissions
- ▶ Scope 3: Other Indirect Emissions

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The GHG results and analysis for The Avenues–Kuwait provides a comprehensive overview of all operational activities. The assessment presents a detailed breakdown of specific emission sources, enabling a thorough evaluation of the mall's carbon footprint.

Total GHG Emissions

723,271.27 tCO₂e

The Avenues–Kuwait's total GHG emissions for the 2024 reporting period amount to **723,271.27 tCO₂e**.

SCOPE 1

3,548.52 tCO₂e

0.49 %

SCOPE 2

95,857.10 tCO₂e

13.25 %

SCOPE 3

623,865.65 tCO₂e

86.26 %

To improve the accuracy of identifying GHG emission hotspotsThe Avenues–Kuwait's inventory is organized by emission source, with this classification presented in Figure 2 and Figure 3.

Figure 2 Percentage Contributions of Total Scopes 1, 2, & 3 Emissions per Category

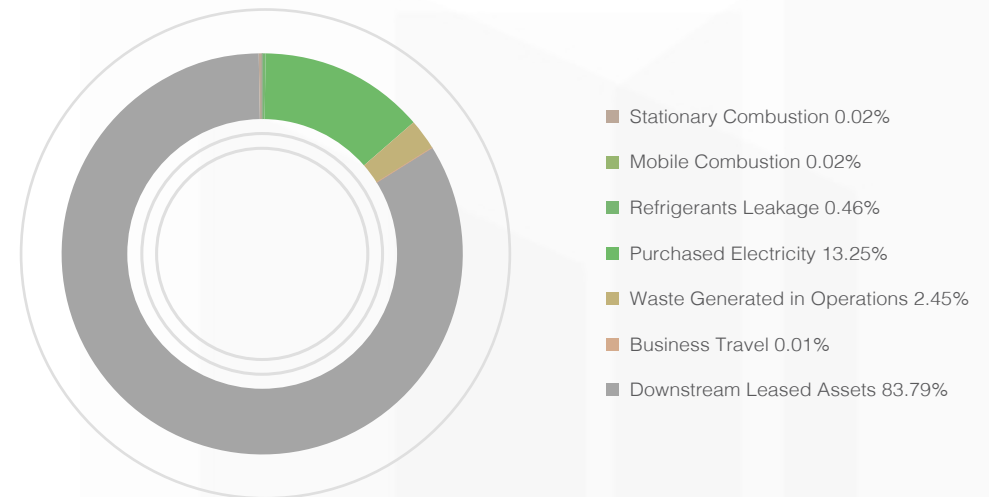
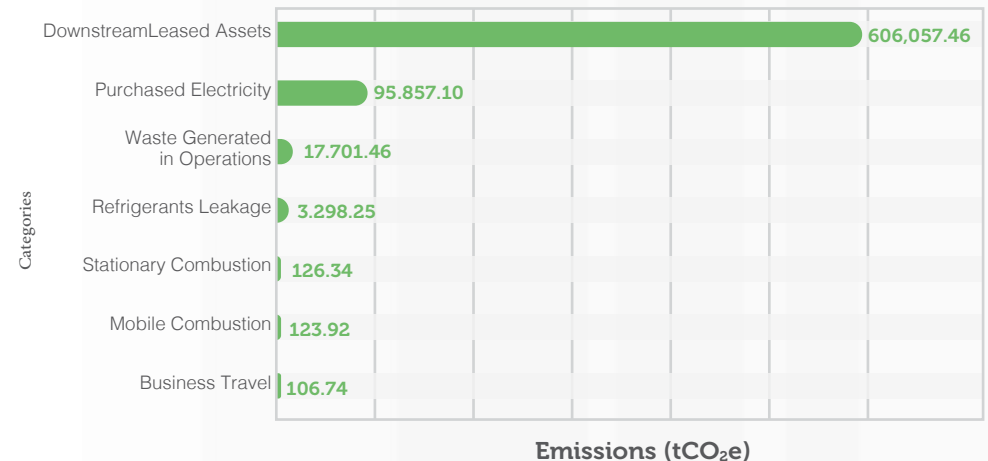


Figure 3 Breakdown of Total Scopes 1,2, & 3 Emissions per Category (tCO₂e)



Scope 1: Direct Emissions

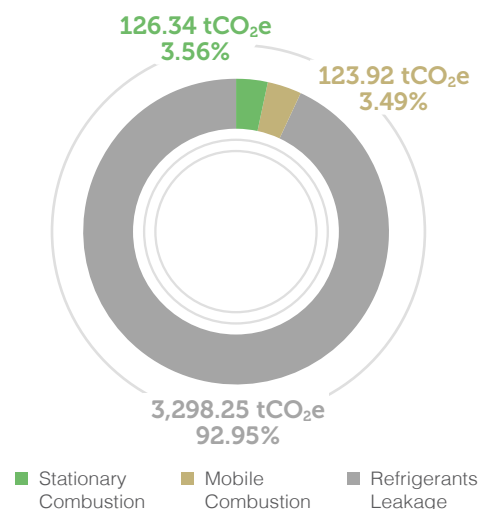
3,548.52 tCO₂e

0.49% (Percentage Contribution of Total Emissions)

Scope 1 emissions, as defined by the GHG Protocol, are direct greenhouse gas emissions from sources owned or controlled by the organization. These include emissions from stationary combustion sources (e.g., generators, boilers, furnaces), mobile combustion sources (e.g., vehicles), chemical processes, and fugitive emissions. In essence, Scope 1 emissions are those that arise directly from an organization's operations.

Scope 1 emissions amounted to 3,548.52 tCO₂e, accounting for 0.49% of total emissions. As shown in Figure 4, the largest contributor was refrigerant leakage, representing 92.95% of total Scope 1 emissions. This was followed by stationary combustion (3.56%) and mobile combustion (3.49%).

Figure 4 Percentage Contribution of Scope 1 Emissions by Category



DATA USED AND ASSUMPTIONS

Table 2 summarizes the emission sources included in The Avenues–Kuwait's Scope 1 inventory. Data was directly available, with the only assumptions relating to the heating values of fuels, which were taken from IPCC guidelines. This assumption has a minimal impact on the overall results.

Table 2 Scope 1 Data Used and Assumption

Category	Source	Data	Data Status	Assumptions
Stationary Combustion	Generators	- Type of Emissions Source - No. of Equipment - Type of Fuel/Gas - Total Fuel Consumption	All data was available.	Heating values of fuel were based on IPCC guidelines.
Mobile Combustion	Cars	- Type of Emissions Source - No. of Vehicles - Type of Fuel/Gas - Total Fuel Consumption	All data was available.	Heating values of fuel were based on IPCC guidelines.
Refrigerants Leakage	R-22 R-134a R-410A	- No. of Equipment - Type of Refrigerant - Total Recharge Amount	All data was available.	No assumptions made



Stationary Combustion

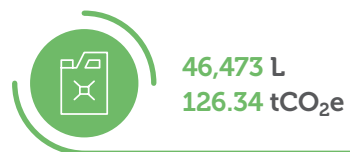
126.34 tCO₂e

3.56% (Percentage Contribution of Scope 1 Emissions)

Stationary combustion emissions result from the burning of fuels in fixed equipment or sources. At The Avenues–Kuwait, these emissions are generated from diesel-powered backup generators used during power outages. Emissions are calculated by multiplying the annual fuel consumption of each identified source by the corresponding emission factor, as outlined in the following equation:

Stationary Fuel Combustion
(tCO₂e/year)=Fuel Consumption
(L/year)×EF (tCO₂e/L)

The total diesel consumption amounted to 46,473 liters, resulting in 126.34 tCO₂e of emissions. This represents 3.56% of Scope 1 emissions and 0.02% of total emissions.



Mobile Combustion

123.92 tCO₂e

3.49% (Percentage Contribution of Scope 1 Emissions)

Mobile combustion emissions are generated from the use of fuel in vehicles operated by The Avenues–Kuwait for business purposes. As these vehicles are owned or controlled by the organization, the associated emissions are classified under Scope 1. The fleet primarily consists of gasoline-powered cars, SUVs, buses, and pickup trucks, along with diesel-powered pickup trucks and forklifts.

Fuel consumption data was reported as an annual total and was directly applied as the activity data for calculating emissions, in accordance with the method presented in the equation below:

Mobile Fuel Combustion (tCO₂e/year)=Fuel Consumption (L/year)×EF (tCO₂e/L)

6 SEDAN CARS



8 SUVs



2 PICKUP TRUCKS



2 BUSES



CONSUMPTION (L)

52,584

1 PICKUP



1 FORKLIFT



CONSUMPTION (L)

1,500



Refrigerants Leakage

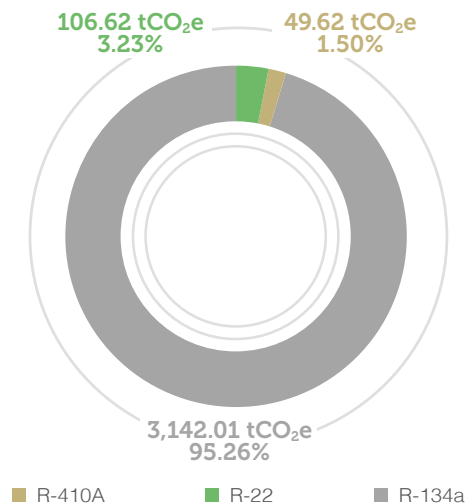
3,298.25 tCO₂e

92.95% (Percentage Contribution of Scope 1 Emissions)

Fugitive emissions arise from the unintended release of synthetic refrigerants, primarily from air conditioning and refrigeration systems. These emissions typically occur due to system design limitations and the gradual deterioration of equipment over time. At The Avenues–Kuwait, commonly used refrigerants include R-134a, R-410A, and R-22, all of which have high global warming potentials and are significant contributors to GHG emissions. Emissions from these sources are calculated using the following equation:

$$\text{Refrigerant Emissions (tCO}_2\text{e)/year} = \text{Refrigerant Leakage (kg/year)} \times \text{EF (tCO}_2\text{e/kg)}$$

Figure 5 Percentage Contribution of Refrigerants Emissions



Refrigerant leakage is the largest contributor to Scope 1 emissions at The Avenues–Kuwait, representing 92.95% of Scope 1 emissions and 0.46% of total emissions. Three refrigerant gases are in use: R-410A, R-22, and R-134a. Among these, R-410A has the highest GWP, at 2,255 kgCO₂e/kg, followed by R-22 at 1,960 kgCO₂e/kg, and R-134a at 1,530 kgCO₂e/kg.

As shown in Figure 5, R-410A accounted for the lowest share of refrigerant emissions (1.50%), due to its comparatively lower consumption and leakage rates. This was followed by R-22 at 3.23%, while R-134a represented the largest share at 95.26% of total refrigerant leakage emissions.



Scope 2: Indirect Emissions

95,857.10 tCO₂e

13.25% (Percentage Contribution of Total Emissions)

Scope 2 emissions represent indirect GHG emissions resulting from the generation of purchased electricity, steam, heating, or cooling consumed by an organization. These emissions physically occur at the utility provider's facilities, but they are attributed to the organization that consumes the energy.

At The Avenues–Kuwait, all electricity requirements are met through supply from the national grid. Scope 2 emissions were calculated by multiplying the total electricity consumed during the reporting period by the emission factor specific to Kuwait's grid, following the calculation method presented below:

$$\text{Electricity Consumption (tCO}_2\text{e/year)} = \text{Electricity Consumption (kWh/year)} \times \text{EF (tCO}_2\text{e/kWh)}$$

DATA USED AND ASSUMPTIONS

Table 3 summarizes the emission sources included in The Avenues–Kuwait's Scope 2 inventory.

Table 3 Purchased Electricity Emission Source and Assumptions

Category	Source	Required Data	Data	Assumptions
Purchased Electricity	Electricity Sourced	Consumption in kWh	All data was available	No assumptions made

Scope 2 emissions from purchased electricity accounted for 13.25% of total emissions, ranking as the second-largest contributor. Total electricity consumption during the reporting period resulted in 95,857.10 tCO₂e, as shown below.



142,010,517
kWh/year



95,857.10
tCO₂e

Scope 3: Other Indirect Emissions

623,865.65 tCO₂e

86.26% (Percentage Contribution of Total Emissions)

Scope 3 emissions represent indirect greenhouse gas (GHG) emissions linked to The Avenues–Kuwait's operations, but arising from sources that Mabaneer does not own or directly control. Scope 3 emissions have been assessed for three categories: waste generated in operations, business travel, and downstream leased assets.

Total Scope 3 emissions for The Avenues–Kuwait amounted to 623,865.65 tCO₂e. As illustrated in Figure 6, downstream leased assets represent the largest share (97.15%), followed by waste (2.84%) and business travel (0.02%). Table 4 summarizes the emission sources included in The Avenues–Kuwait's Scope 3 inventory.

Figure 6 Breakdown by Category of Total Scope 3 Emissions

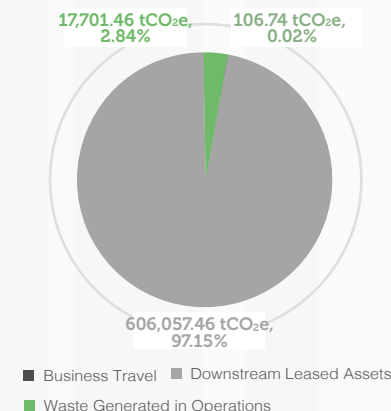


Table 4 Scope 3 Emission Sources and Assumptions

Category	Source	Required Data	Data	Assumptions
Waste Generated in Operations	Recycled Waste Landfilled Waste	- Type of each waste - Total amount of each type of waste - Disposal method	All data was available	No assumptions made
Business Travel	Employee Flights	- Departure and destination location - Air travel class - Number of trips - One-way/Round Trip	All data was available	No assumptions made
Downstream Leased Assets	Tenant electricity used and stationary fuel combustion	- Electricity consumed - Fuel use in generators	All data was available	No assumptions made



Waste Generated in Operations

17,701.46 tCO₂e

2.84% (Percentage Contribution of Scope 3 Emissions)

Waste-related emissions arise from solid waste generated by operations within The Avenues–Kuwait. Emissions were based on the total volume of waste collected, categorized by handling method (e.g., landfill, incineration, or recycling). Emissions from waste disposal were calculated by multiplying the mass of waste generated by the standard emission factors from Ecoinvent using the following equation:

$$\text{Waste Generated Emissions (tCO}_2\text{e/year)} = \text{Waste Quantity (kg/year)} \times \text{EF (tCO}_2\text{e/kg)}$$

Waste generated in operations accounted for 17,701.46 tCO₂e, representing 2.84% of total Scope 3 emissions or 2.45% of total emissions. Landfilled waste amounted to 27,882,000 kg and recycled waste was 2,118,598 kg. As shown in Figure 7, 85.90% of the emissions were attributable to landfill disposal, while recycled waste contributed 14.10%.

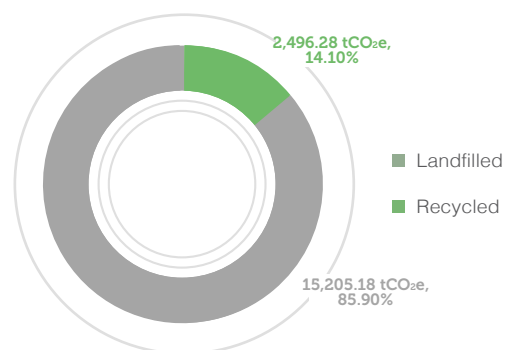


30,000,598 kg



17,701.46 tCO₂e

Figure 7 Breakdown of Recycled and Landfilled Wastes Emissions



Business Travel

106.74 6 tCO₂e

0.02% (Percentage Contribution of Scope 3 Emissions)

Business travel emissions arise solely from employee air travel undertaken for work purposes. Data was collected from flight records and emissions were calculated using the International Civil Aviation Organization (ICAO) Carbon Emissions Calculator. This provided a standardised and widely recognized approach to quantifying the environmental impact of business travel, ensuring consistency with international reporting practices.

Business travel accounted for 106.74 tCO₂e, representing 0.02% of Scope 3 emissions.



294 Trips



106.74 tCO₂e

Downstream Leased Assets

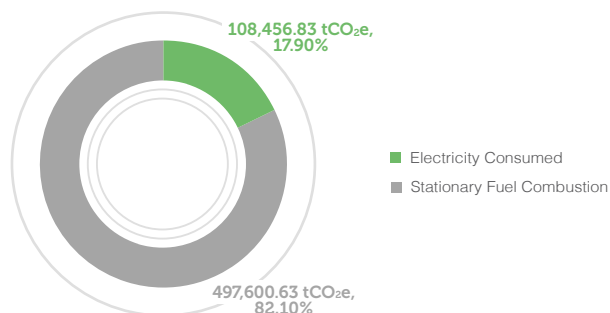
606,057.46 tCO₂e

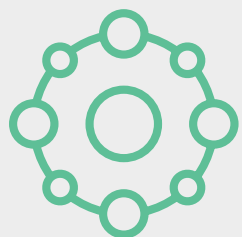
97.15% (Percentage Contribution of Scope 3 Emissions)

Downstream leased assets include the indirect emissions associated with tenant-controlled operations within The Avenues–Kuwait. Although these activities fall outside Mabaneer's direct operational control, they represent a significant share of the facility's total energy demand. This category covers electricity consumption and stationary fuel combustion of LPG fuel.

Downstream leased assets contributed 606,057.46 tCO₂e, representing approximately 97.15% of total Scope 3 emissions and 83.79% of total emissions. As shown in Figure 8, stationary fuel combustion amounted to 82.10% of the downstream emissions, while tenant electricity use accounted for 17.90%.

Figure 8 Breakdown of Downstream Leased Assets Emissions





Section 5

Data Quality

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The GHG Protocol Corporate Standard is founded on five key reporting principles: relevance, completeness, consistency, transparency, and accuracy. Adhering to these principles ensures the integrity of data, facilitates comparability across reporting periods, and supports the development of effective strategies for reduction of emissions.

ACCURACY

Ensures that emissions figures are precise and representative of actual conditions, reducing the likelihood of errors that could lead to ineffective climate-related decisions.

COMPLETENESS

Requires the inclusion of all significant emission sources within the established boundaries, ensuring that no material data is omitted.

CONSISTENCY

Calls for the application of uniform methodologies across reporting periods, enabling reliable comparisons over time.

TRANSPARENCY

Emphasizes clear documentation of methodologies, assumptions, and data sources, making reported information understandable and verifiable.

RELEVANCE

Ensures that data collected and reported serves its intended purpose by providing meaningful insights for stakeholders and supporting effective emissions management.



Table 5 presents a detailed review and evaluation of data quality, assessed against these reporting principles in relation to The Avenues–Kuwait's activity data sources used for emissions calculation.

LEGEND

- GOOD
- SATISFACTORY
- PARTIALLY SATISFACTORY

Table 5 Emission Sources, Data Status and Insights

Emission Source	Source	Data Status	Data
Stationary Combustion	Fuel Burning – Diesel Oil	The data is available on an annual basis rather than monthly	- For completeness and accuracy, diesel consumption should be recorded monthly per generator. - For consistency, data should be automatically recorded through a data management system.
Mobile Combustion	Fuel Burning – Owned Vehicles	The data is available on an annual basis rather than monthly	For consistency, data should be recorded automatically through a data management system.
Fugitive Emissions	Refrigerants	No data gaps	- For completeness and accuracy, refrigerants recharge should be recorded exactly per equipment. - For consistency, data needs to be recorded automatically through a data management system.
Electricity	Purchased Electricity	No data gaps	- For completeness and accuracy, it is important to install electricity meters on all floors to record electricity consumption. - For consistency, data should be recorded automatically in a data management system.
Waste Generated in Operations	Waste	No data gaps	For completeness and accuracy, the amount of waste and handling method should be recorded and input into a data management system.
Business Travel	Air Travel	No data gap	For consistency, data should be recorded automatically in a data management system.
Downstream Leased Assets	Purchased Electricity Fuel Burning – LPG	No data gaps	- For completeness and accuracy, it is important to install electricity meters for each tenant to record electricity consumption. - For completeness and accuracy, diesel consumption should be recorded monthly per generator for each tenant.



Section 6

Internal Benchmarking

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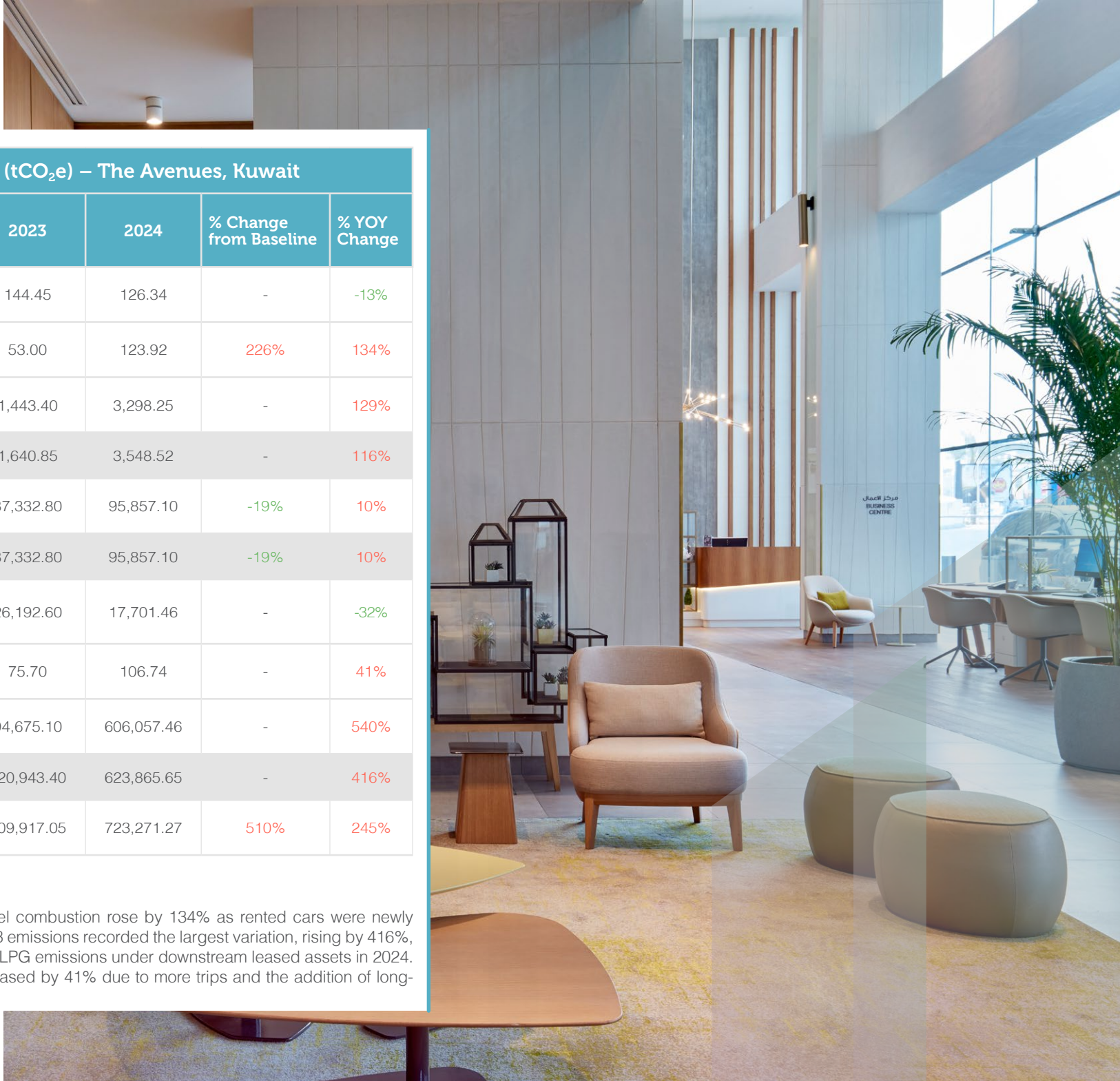


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GHG Emissions (tCO₂e) – The Avenues, Kuwait

Category	2019 (Baseline)	2023	2024	% Change from Baseline	% YOY Change
Stationary Combustion	NA	144.45	126.34	-	-13%
Mobile Combustion	38.00	53.00	123.92	226%	134%
Fugitive: Refrigerants	NA	1,443.40	3,298.25	-	129%
Scope 1	38.00	1,640.85	3,548.52	-	116%
Purchased Electricity	118,544.00	87,332.80	95,857.10	-19%	10%
Scope 2	118,544.00	87,332.80	95,857.10	-19%	10%
Waste Generated in Operations	NA	26,192.60	17,701.46	-	-32%
Business Travel	NA	75.70	106.74	-	41%
Downstream Leased Asset	NA	94,675.10	606,057.46	-	540%
Scope 3	-	120,943.40	623,865.65	-	416%
Total	118,582.00	209,917.05	723,271.27	510%	245%

Between 2023 and 2024, mobile fuel combustion rose by 134% as rented cars were newly included in Scope 1 in 2024. Scope 3 emissions recorded the largest variation, rising by 416%, mainly due to the inclusion of tenant LPG emissions under downstream leased assets in 2024. Business travel emissions also increased by 41% due to more trips and the addition of long-haul flights.



Section 7

Strategic Direction

- Key Emission Hotspots & Insights
- The Way Forward

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The 2024 CF assessment for The Avenues–Kuwait provides a comprehensive view of the facility's GHG emissions across Scopes 1, 2, and 3. The results confirm that the footprint is largely concentrated in few key areas with downstream leased assets representing the dominant source of Scope 3 emissions,

followed by purchased electricity and waste generated in operations. While other categories such as stationary combustion, mobile fuel use, refrigerant leaks, and business travel contribute a relatively smaller share.

Key Emission Hotspots & Insights

3

SCOPE 3:
Downstream Leased Assets

Tenant-controlled fuel and electricity use represents 97.15% of Scope 3 emissions; tenant engagement is essential to drive reductions.

2

SCOPE 2:
Electricity

Purchased grid electricity presents opportunities for improved efficiency and renewable energy adoption to reduce emissions.

1

SCOPE 1:
Refrigerants

High-GWP refrigerants (e.g., R-22, R-410A) are a significant hotspot; preventive maintenance and low-GWP alternatives are priorities.

Through this assessment, The Avenues–Kuwait has strengthened its understanding of where emissions are most concentrated and where targeted actions can deliver the greatest impact. These insights will guide Mabanee in mitigating these hotspots where applicable.





The Way Forward

Building on the 2024 Carbon Footprint and ongoing sustainability achievements, Mabaneer has set a forward-looking agenda to accelerate decarbonization, circular economy adoption, and operational

excellence across The Avenues–Kuwait and future developments. These initiatives form part of Mabaneer's broader sustainability roadmap under the Tarsheed program and Kuwait Vision 2035.

PLANNED AND ONGOING SUSTAINABILITY INITIATIVES:

ENERGY TRANSITION AND CARBON REDUCTION

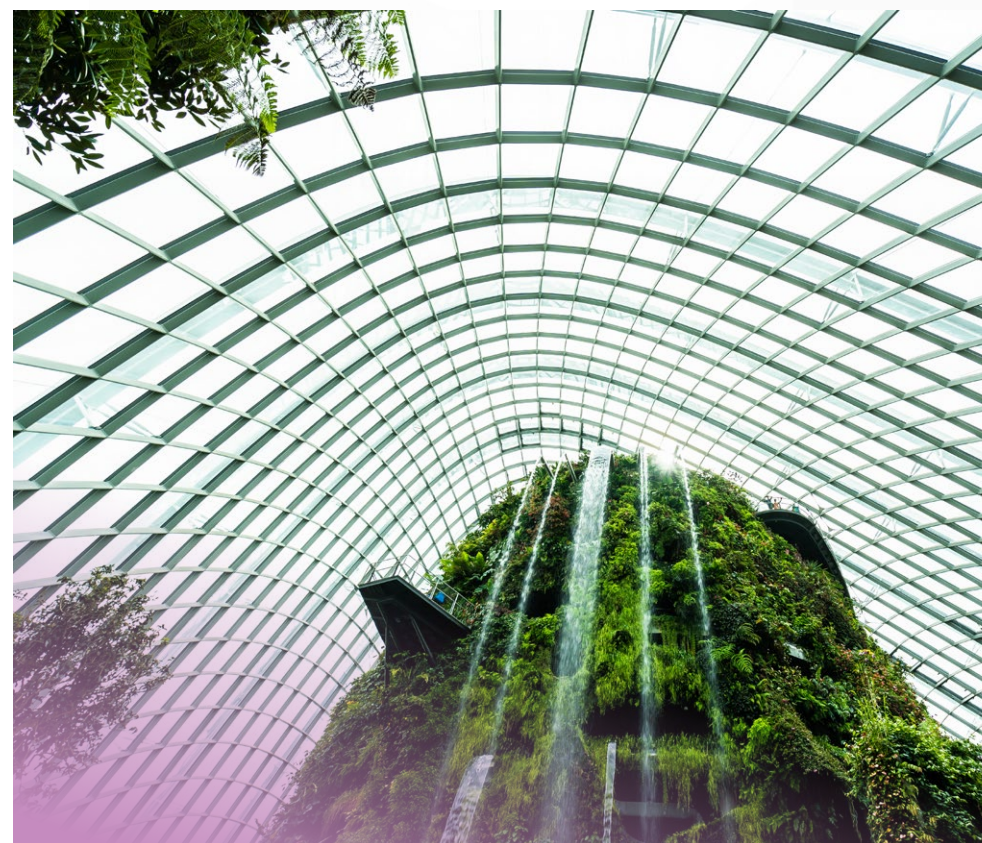
- To reduce the landlord's energy consumption by 3% over three years through the MEW's Tarsheed Program by:
 - Improvements in chillers' efficiency and reducing the number of operational chillers.
 - Adjusting the fountains' operational hours.
 - Adjusting the twin elevators' operational hours
 - Turning off all water heaters.
- To enhance tenant engagement through targeted awareness initiatives, fostering shared sustainability objectives, and implementing incentive programs designed to encourage reduced resource consumption.

WATER REDUCTION TARGETS

- Targeting 5% reduction in landlord consumption over 3 years.

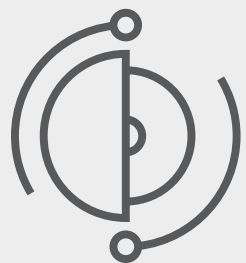
WASTE REDUCTION TARGETS

- Non-hazardous waste: 100% of glass waste and 1 % of cardboard to be recycled over 3 years.
- Hazardous waste: 2% of oil to be recycled over 3 years.
- Collaborate with tenants and technology partners to promote circularity by extending the lifecycle of equipment through donation, repair, or resale where possible.



GHG ACCOUNTING AND VERIFICATION

- Perform internal and independent third-party verification of GHG emissions in future assessments to enhance accuracy, credibility, and compliance with international standards.



Section 8

Appendices

- ▶ APPENDIX 1: EMISSIONS FACTORS (EFs)
- ▶ APPENDIX 2: GHG INVENTORY TABLE

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APPENDIX 1: EMISSIONS FACTORS (EFs)

Emission Factors (EFs) are coefficients that quantify the amount of GHGs emitted or absorbed per unit of activity. The table below lists the EFs applied in this year's assessment.

Emission Sources	Value	Unit	Reference
Diesel Stationary Combustion	2.72	kgCO ₂ e/l	IPCC AR6
Gasoline Mobile Combustion	2.28		
Diesel Mobile Combustion	2.72		
Refrigerant leaks (R-134a)	1,530.00	kgCO ₂ e/kg	
Refrigerant leaks (R-22)	1,960.00		
Refrigerant leaks (R-410A)	2,255.50		
Grid Electricity (Kuwait)	0.675	kgCO ₂ e/kWh	UNFCCC



APPENDIX 2: GHG INVENTORY TABLE

Category	Source	Fuel Type	Total (lit)	GHG Emissions tCO ₂ e
Stationary Combustion	Diesel Generators	Diesel oil	46,473.00	126.34
Total GHG Emissions per Category (tCO ₂ e)				126.34
Mobile Combustion	6 Sedan, 8 SUVs, 2 Pickup Trucks & 2 Buses	Gasoline	52,584.00	119.85
	1 Pickup Truck & 1 Forklift	Diesel oil	1,500.00	4.08
Total GHG Emissions per Category (tCO ₂ e)				123.92
Category	Type of Refrigerant		Refrigerant Charged (kg)	GHG Emissions tCO ₂ e
Refrigerant leaks	R-134a		2,053.60	3,142.01
	R-22		54.40	106.62
	R-410A		22.00	49.62
Total GHG Emissions per Category (tCO ₂ e)				3,298.25
Scope 1				3,548.52
Category	Source		Total (kWh)	GHG Emissions tCO ₂ e
Electricity	Electricity Consumed		142,010,517	95,857.10
Scope 2				95,857.10
Category	Source	Unit	Total	GHG Emissions tCO ₂ e
Waste Generated in Operations	Waste	kg	30,000,598	17,701.46
Business Travel	Air Travel	Trips	294	106.74
Downstream Leased Assets	Electricity Consumed	kWh	160,676,783	108,456.83
	Stationary Fuel Combustion - LPG	m³	303,129.00	497,600.63
Scope 3				623,865.65
Total Emissions (tCO ₂ e)				723,271.27





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