



888 Holdings PLC

Greenhouse Gas (GHG) Emissions Report 2019

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Prepared by:	Sivan Shatach
Reviewed by:	Benud Teneh

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1. Introduction

1-1 Purpose

888 Holding PLC (hereinafter '888') is a public company established in 1997, listed on the London Stock Exchange employing over 1,400 workers, providing online gaming entertainment and solutions, including gaming services to third party brands.

888's headquarters is based in Gibraltar, with group offices in Antigua, Israel, USA, Romania, Ireland and UK. It owns a data center in Gibraltar, as well as several servers co-located in third-party data centers in the USA – Delaware, Nevada, New Jersey and in UK.

The following individuals have provided data regarding 888 for the purposes of this document:

★ Mr. Nati Toledo-Misgav
 VP of Budget Planning & Facilities
 Random Logic Ltd. , 888 Holdings PLC

★ Mr. Hanoch Sagi
 Facilities Manager
 Random Logic Ltd. , 888 Holdings PLC

1-2 Regulatory Framework

Although 888 is incorporated in Gibraltar and therefore not subject to specific requirement for quantifying or reporting on its Greenhouse Gas (GHG) emissions, as a company listed on the London Stock Exchange, 888 has chosen to request a preparation for a report in line with best practice and UK regulation. Target Greenhouse Gases will correspond to the 6 gases listed in the Kyoto protocol (order of 24.8.2011):

» Carbon dioxide (CO₂) » Methane (CH₄) » Nitrogen protoxide (N₂O) » Hydrofluorocarbons (HFC) » Perfluorocarbons (PFC) » Sulphur hexafluoride (SF₆)¹

Emissions are expressed in equivalent tons of carbon dioxide (CO₂). The regulatory GHG registry is limited to scope 1 and 2, i.e.: 1- Direct emissions, produced by the fixed and mobile sources required for company operations (fleet of vehicles used by the company, processes, etc.). 2- Indirect emissions associated with the consumption of electricity, heat and steam, as required for company operations (electricity purchased, etc.). Scope 3 is not mandatory, covering optional inventory of other indirect emissions, such as transport-related activities in vehicles not owned or controlled by the reporting entity, electricity-related activities not covered in Scope 2, outsourced activities, waste disposal, etc.

¹ The Israeli National Registry for GHG also covers inventory of NF3 since 2013.

1-3 Content of the report and methodology

This Greenhouse Gas (GHG) report covers 888 Holdings PLC's GHG emissions for the period of January 1st through to December 31st, 2019. The report was prepared by AVIV AMCG based on data provided by 888 Holdings PLC and was carried out using the GHG tool of the Israeli Ministry of Environmental Protection (MoEP) for the voluntary national GHG registry.

The recommended methodology by the MoEP for performing the emissions' registry is by using the Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories (2006). Nevertheless, the Israeli protocol is mainly based on the WRI/WBCSD (World Resources Institute/World Business Council for Sustainable Development) protocol for reporting, and is compatible with the International Organization for Standardization's ISO 14064.

1-4 Definitions

A few definitions from the aforementioned methodology:

Greenhouse gas (GHG):	Gaseous component of the natural or man-made atmosphere, which absorbs and emits radiation at a specific wavelength of the infrared spectrum emitted by the surface of the Earth, the atmosphere and clouds.
Greenhouse gas (GHG) emissions report:	Evaluation of the total volume of greenhouse gases emitted into the atmosphere over one year by the activities of the legal person, expressed in equivalent tons of carbon dioxide.
Emission scope:	All GHG emissions sub-categories. Three emission scopes are identified: direct GHG emissions, indirect GHG emissions relating to energy and other indirect GHG emissions.
Direct GHG emission:	Emission of GHG from fixed and mobile sources of greenhouse gases controlled by the legal person.
Indirect GHG emission associated with energy:	Emission of GHG, from the generation of electricity, heat or steam imported or consumed by the legal person for its operations.
Other indirect GHG emission:	Emission of GHG, other than GHG emissions associated with energy, as a consequence of the activities of a legal person, but from sources of greenhouse gases controlled by other entities.
Emission subcategory:	GHG emissions from homogeneous sources or types of sources.
Global Warming Potential (GWP):	Factor describing the impact of the radiative forcing of a given mass of greenhouse gas over an equivalent mass of carbon dioxide for a given period

Emission Categories and Scopes

Table 1-1: Relevant emission categories, scopes and identification numbers used in the MoEP's registry.

Emission category	Scope	Category No.	Emission Subcategory	Sub No.	Emission Description	Inventory obligations
Direct GHG emissions	1	3	Direct emissions from fixed sources of combustion	3.1	Fuels consumed by fixed sourced of combustion: Petroleum products, natural gas, coal, wood or other fuels.	Mandatory
				4	Direct emissions from mobile sources	
		4.2	Use of off-road vehicles			
		5	Fugitive direct emissions			
				5.2	Fire extinguishers - use of fluorine products	
Indirect GHG emissions associated with energy	2	2	Energy Purchase	2.1 +2.2	Indirect emissions relating to the consumption of electricity	Mandatory
				2.3 +2.4	Indirect emissions relating to the consumption of steam, heat or cold	
Other indirect GHG emissions	3	6	Indirect Emissions	6.1	Upstream goods transport, Downstream goods transport, Transport for visitors and customers, Professional travel, Work-home travel, Waste transport	Optional
				6.2	Assets leased upstream, Downstream leasing, Investment	
				6.3	Use of products sold, End-of-life for products sold, waste removal of materials purchased by company used in the production process	

2. Company profile and reporting boundaries

2-1 Company profile

Company name: 888 Holdings PLC

Address: 601-701 Europort, Europort Road, Gibraltar, GX11 1AA

Employee Headcount: 1,417 in December 2019

Outsource and Consultants: 142 in December 2019

Turnover: US \$540.6m in December 2019

2-2 Organizational Boundaries

Standard ISO 14064-1 describes two consolidation modes used to determine the organizational scope for reporting greenhouse gas emissions:

The “share of capital” approach: the organization consolidates emissions for equipment and activities, equivalent to capital invested in the latter (equity share);

The “control” approach: either *financial*: the organization consolidates 100% of emissions for units which it controls financially, or *operational*: the organization consolidates 100% of emissions for units which it controls operationally (i.e. it operates).

The MoEP’s method adopts the “operational control” approach- limited to sites where all equipment and activities are controlled by the subsidiaries of the company, and the associated emissions therefore must be consolidated.

The following of 888’s subsidiaries have a material impact on the Group’s GHG emissions:

- * Dixie Operations Limited (Antigua)
- * Cassava Enterprises (Gibraltar) Ltd
- * Random Logic Ltd (Israel)
- * Sparkware Technologies SRL (Romania)
- * 888 spectate (Dublin, Ireland)
- * 888 US Services Inc (New Jersey, USA)
- * Virtual Marketing Services Ltd (UK)

The company’s subsidiary in UK is not included in the mandatory inventory and report (only in scope 3), assuming de minimis based on data supplied by the company, is negligible for determining GHG emissions.

2-3 Operational Boundaries

The following sites are included in the GHG emissions report:

Table 2-1: Office and data centers sites – address, area and emission scope

Office name-location	Address	Area of office (Sq. meters)	Emission Scope
Antigua Office	Antigua Home and Office Depot Bldg, Old Parham Rd, St. John's, Antigua	1,053	1, 2, 3
Gibraltar Office	601-701 Europort, Europort Road, Gibraltar, GX11 1AA	1,785	1, 2, 3
Herzliya Office, Israel	85A Medinat Hayehudim st., Herzliya Pituach, Israel 46140	11,525	1, 2, 3
Bucharest Office, Romania	Bvd. Vasile Milea, No. 4E, Afi Business Park1, District 6, Bucharest, Romania	1,560	1, 2, 3
888spectate, Dublin	Heather House, Heather Road, Sandymount Industrial Estate, Dublin 18	1,050	1, 2, 3
New Jersey (Telx)	N/A	340	2
Gibraltar Data Centre	601-701 Europort, Europort Road, Gibraltar, GX11 1AA	< 1	2
London Office, UK	15 Portland Place, London, W1B 1PT (leased)	252	3
UK Telecity Data Centre	N/A	21	3

2-4 Exclusions and remarks:

- * Fire extinguishers data was found to be irrelevant since all offices for which the data was supplied: Antigua, Israel, and Romania - use in their facilities powder extinguishers that do not contain fluorine products.
- * Electricity consumed by 888 owned servers fall within scope 2.
- * The lease at the UK office includes all utilities (electricity, gas for heating), and according to information provided by the company's representative – employs only 10 employees and considered small and negligible in comparison to the other subsidiaries. thus, the site was not considered to be in 888's operational control – therefore was not included in scope 2.
- * Emissions from vehicles, which are in the operational control of the subsidiary Cassava Enterprises (Gibraltar), were calculated under scope 1. Other provided data for private owned or leased vehicles were immaterial and excluded from the total inventory.
- * Air travel to and from all offices contribute to scope 3 GHG emissions.

3. Detailed GHG emissions per category-Scope

3-1 Direct GHG emissions (Scope 1)

Direct emissions from sources of combustion are exclusively generated by the combustion of any type of fuel within fixed sources controlled by the legal person carrying out the balance, i.e. burners, ovens, turbines, flares, boilers, generators, or other fixed motors, etc. The fuel in question may be a fossil fuel (oil products, bituminous coal, gas, etc.) or other (biomass, organic and non-organic waste, etc.).

Identification of 888 sources:

3-1-1 Direct emissions from fixed sources of combustion

The sites at Antigua and Gibraltar use diesel generators as backup supply of energy. The data for Antigua office was calculated by the supplier, while the Gibraltar office data was based on measurements. The Romania office uses natural gas for heating purposes, and the activity data is an estimated amount provided by the technical manager of the office.

Calculating emissions:

The diesel consumption was provided by the company based on calculations and measurements performed. Refilling the generator in Antigua office and using diesel fuel in Gibraltar office generator during 2019. Diesel consumption was multiplied by an emission factor accordingly.

Diesel consumption in Gibraltar office generator reached 400 liters in 2019.

Diesel consumption in Antigua office generator to 833 liters in 2019.

In the current reporting year, the Company was unable to provide the amount of methane gas (CH₄) used for A\C needs in Romania office in 2019, therefore information was based on the amount of methane gas (CH₄) used reported for 2015 – 6,073m³.

3-1-2 Direct emissions from mobile sources

Mobile sources include petrol and diesel vehicles under operational control of the Gibraltar office.

Calculating emissions:

The total yearly Km were calculated according to the Gibraltar office monthly car expenses records, provided by the company, based on car mileage and diesel fuel consumption per liter specific to each vehicle type in the list provided, and based on fuel use supplied by the petrol company invoices.

According to the car expenses records during 2019 approximately 128,258 liters of petrol and diesel was consumed. of these, approximately 3,970 liters of petrol and diesel was consumed in company's private vehicles, while the remaining volume (124,280 liters) consumed in use of leased vehicles. In addition, reported 234,452 Km in vehicle mileage.

For comparison, in 2015 approximately 296,155 liters of petrol were consumed by the company's leased vehicles (no separation was made between volume of fuel and diesel consumed in company's private vehicles, and company's leased vehicles). In addition, reported 111,162 Km in vehicle mileage.

In 2015, the total consumption of diesel and petrol volume reported were included in the emissions calculations under section "*Direct emissions from mobile sources*" (both company's leased vehicles and company's private vehicles), in 2019, separation was made and only private company vehicles were reported, since leased vehicles should not be reported under Scope 1.

3-1-3 Fugitive direct emissions

The R410-A consumption was measured and provided by the A/C Vendor, based on refilling 5 chillers in the Data Center in Gibraltar. The chillers are active 7 hours a day, normally between the months of January to September. During that period, the chillers in the Data Center in Gibraltar consumed 160 liters of R410-A.

The R-134A consumption was measured and provided by the A/C vendor, based on refilling 3 chillers in the Israel office. During that period, the chillers in the Israel office consumed 306 liters of R-134A.

Total GHG emissions (t-CO₂e) contribution to scope 1 – Direct GHG emissions are shown in table 3-1.

Total direct GHG emissions are as follows:

Table 3-1: Scope 1 GHG emissions (t-CO₂e) contribution by source

Section	Category No	Emission Sub category	GHG emission (metric ton CO ₂ eq)	Contribution to scope 1 (%)
3-1-1	3	Direct emissions from fixed sources of combustion	40.77	5
3-1-2	4	Direct emissions from mobile sources	49.49	6.5
3-1-3	5	Fugitive direct emissions	693.16	88.5
	Total		783.42	100

3-2 Indirect GHG emissions associated with energy (Scope 2)

3-2-1 Indirect emissions relating to the consumption of electricity

Indirect emissions related to electricity consumption are from various sources (example: heating, cooling and lighting).

Identification of 888 sources:

Energy data for offices was obtained from utility bills, including server's energy consumption.

Calculating emissions:

Emissions calculations were carried out by using specific emission coefficients from each country. In Israel, the electricity producer is "**Israel Electric Corporation**" (IEC)- the emission coefficient is entered in the MoEP emission calculator (Version 11.0, July 2019).

For each of the offices abroad, specific emission coefficients were obtained from websites of each country's Environmental Ministry, and from annual and periodic GHG documents issued during the last few years, where there were difficulties to locate these emission coefficients.

The impact of energy consumption was calculated based on the usage emission factors for all locations covered in table 2-1 scope 2.

Emission factors for Antigua electricity consumption are based on [UNDP inventory](#).

Emission factors for Gibraltar electricity consumption are based on [Gibraltar City Inventory 2016](#).

Emission factors for Dublin electricity consumption are based on [Ireland's National Inventory Report 2019](#).

Emission factors for Romania electricity consumption are based on [Romania's Third Biennial Report under the UNFCCC](#).

According to the electricity data during 2019 the company's offices in Israel consumed 3,663,628 kWh, Gibraltar offices consumed 1,051,640 kWh, Romania offices consumed 586,284 kWh, Antigua offices consumed 326,936 kWh, USA offices consumed 71,220 kWh, and Dublin offices consumed 60,330 kWh. For comparison, in 2015 the company's offices in Israel consumed 4,427,040 kWh, Gibraltar offices consumed 1,495,169 kWh, Romania offices consumed 1,566,604 kWh, and Antigua offices consumed 5,415 kWh. The company's energy consumption in USA and Dublin offices was not reported.

The Romania offices heating is carried out by A/C using electricity. The annual consumption was 296 MWh and calculated as part of the electricity consumption in Romania offices.

3-2-2 Indirect emissions relating to the consumption of steam, heat or cold

The Gibraltar offices and data center cooling was carried out by chilled water supplied by a third party – “Europort” company. The annual water consumption for 2019 was 171,989 m³, as obtained from the utility bill provided by 888. The energy invested by "Europort" company is for the purpose of water cooling from 12c to 7c.

Total GHG emissions (t-CO₂e) contribution to scope 2 – Indirect GHG emissions associated with energy are shown in table 3-2.

Table 3-2: Scope 2 GHG emissions (t-CO₂e) contribution by source

Section	Category No	Emission Sub category	GHG emission (metric ton CO ₂ eq)	Contribution to scope 2 (%)
3-2-1	2	Indirect emissions relating to the consumption of electricity	3,362 .27	96
3-2-2		Indirect emissions relating to the consumption of steam, heat or cold	149.80	4
	Total		3,512.07	100

3-3 Other indirect GHG emissions (scope 3)

Identification of 888 sources:

Air travel is a major contributor to scope 3 emissions, for which mileage data was provided by 888’s travel agency, through which all company’s flights are booked.

Calculating emissions:

Emissions from air travel was calculated based on the mileage per flight, by using "[myclimate](#)" (A website providing carbon emissions assessment emitted by air travel (based on 3 categories) according to the departure and destination airports calculating according to flight miles).

The 3 categories of mileage per haul as defined in the EPA’s business travel emission factors:

Air Travel - Short Haul (< 300 miles), Air Travel - Medium Haul (>= 300 miles, < 2300 miles), Air Travel - Long Haul (>= 2300 miles), provided for CO₂ Factor (kg/passenger miles).

Air travel mileage reached 5.4 million air miles accumulated during 3,364 trips in 2019.

For comparison, in 2015 Air travel mileage reached 4.5 million air miles accumulated during 1,139 trips.

Total GHG emissions (t-CO₂e) contribution to scope 3 – Other Indirect GHG emissions are shown in table number 3-3.

Table 3-3: Scope 3 GHG emissions (t-CO₂e) contribution by source

Section	Sub No.	Emission Sub Category	GHG emission (metric ton CO ₂ eq)	Contribution to scope 3 (%)
3-3	6.1	Professional travel	1,550.20	100
	Total		1,550.20	100

4. Summary of GHG emissions – organizational carbon footprint

4-1 Carbon footprint summary

The following table 4-1 shows the distribution of greenhouse gas emissions, depending on various scopes.

Table 4-1: Total GHG emissions (t-CO₂e) contribution by scope

Scope	Emission Subcategory	GHG emission (metric ton CO ₂ eq)	Contribution to scope (%)
1	Direct GHG emissions	783.42	13.5
2	Indirect GHG emissions associated with energy	3,512.07	60
3	Other indirect GHG emissions	1,550.20	26.5
	Total	5,845.69	100

Remarks:

- * No adjustments have been made to the gross figures due to either green electricity tariffs or offsetting activities.
- * There are no scope 1 biogenic emissions to report.

4-2 Ratio Performance Indicators

The following table shows the total **scope 1 and 2** emissions against corporate metrics to present an intensity ratio for benchmarking purposes:

Table 4-2: Corporate Performance Indicators

Corporate metric	Ratio performance Indicators (per scope 1 and scope 2)		
	2015	2019	unit
Emission per Headcount	3.7	3.03	tCO ₂ e/employee
Emission per Square meters area of offices*	0.41	0.25	tCO ₂ e/ m ² office area
Emission per Turnover	14	10.8	tCO ₂ e/ M US \$

* Calculation according to Square meters area includes offices that "contribute" to Scopes 1+2 (according to table 2-1)

5. Recommendations

- * Establishing a company approach to energy management, example: GHG emission targets, energy saving measures, including 3-5-year action plan for emission reduction strategy.
- * Conducting a GHG emission report on an annual basis in a consistent methodological approach, in order to receive a more robust and comparable annual emissions.
- * Working towards separation of landlord bills to provide specific electricity consumption in UK offices.
- * Seeking opportunities for offsetting activities.
- * Conducting a more robust assessment for corporate responsibility, including: waste disposal, water consumption, recycling, resource consumption etc.

6. Recommended text for 2019 annual report and accounts

Although 888 is incorporated in Gibraltar and therefore not subject to specific requirement for quantifying or reporting on its Greenhouse Gas emissions, 888 has chosen to request a preparation for a report in line with best practice and UK regulation.

A Greenhouse Gas (GHG) report covering 888 Holdings PLC's GHG emissions for the period January 1st through December 31st 2019 was prepared by AVIV AMCG based on data provided by 888 Holdings PLC, and was carried out using the GHG tool of the Israeli Ministry of Environmental Protection (MoEP) for the voluntary national GHG registry.

The recommended methodology by the MoEP for performing the emissions' registry is by using the Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories (2006).

The MoEP's method adopts the "operational control" approach- limited to sites where all equipment and activities are controlled by the subsidiaries of the company, and the associated emissions therefore must be consolidated.

Direct GHG emissions come from fuels consumed, use of passenger vehicles in operational control of the company and replacement or refill of cooling agents in air conditioning units. Indirect emissions, come mainly from office energy consumption for lighting, heating and cooling. Other indirect emissions are mainly from transport-related activities such as air travel, outsourced activities, waste disposal, etc.

GHG emissions for period of January 1st through to December 31st 2019:

Scope	Emission Subcategory	GHG emission (metric ton CO2 eq)	Contribution to scope (%)
1	Direct GHG emissions	744.88	13
2	Indirect GHG emissions associated with energy	3,512.07	60
3	Other indirect GHG emissions	1,550.20	27
Total		5,807.15	100
Corporate metric		Ratio performance Indicators (per scope 1 and scope 2)	
Emission per Headcount		3.00	tCO ₂ e/employee
Emission per Square meters area of offices*		0.25	tCO ₂ e/ m ² office area
Emissions per Turnover		0.13	tCO ₂ e/ M US \$