

查證聲明書

LRQA Independent Assurance Statement Relating to Shuang Bang Industrial Corp. GHG Inventory Report for the calendar year 2024

服務條件

本保證聲明書乃為双邦實業股份有限公司所準備。

英商勞盛股份有限公司台灣分公司(以下簡稱 LRQA)受双邦實業股份有限公司(以下簡稱双邦實業)之委託以查證其 2024 日曆年度 (01/01/2024~31/12/2024) 期間溫室氣體盤查報告(發行日期:2025 年 12 月 11 日,第 2.0 版), 以下簡稱為”溫室氣體盤查報告”。

此溫室氣體盤查報告包含直接,能源間接以及其他間接溫室氣體排放。双邦實業股份有限公司包含下列的地址範圍內的”織品的應用開發、塗層及加工, 低聚體、樹脂、粒料、薄膜、聚合物片材、有機二元胺化合物、聚甲基丙烯酸甲酯 (PMMA) 的開發、製造, 物理射出發泡中底的開發等運作相關活動, 與其他相關設施設備活動, 如溫室氣體盤查報告中所描述。

溫室氣體盤查報告：双邦實業股份有限公司 2024 年溫室氣體盤查報告書

双邦實業股份有限公司：

1. 永興廠：南投縣南投市永興路 3 號。
2. 仁和廠：南投縣南投市仁和路 155 號。
3. 南崗廠：南投縣南投市南崗三路 101 號。
4. 台北辦事處：台北市大同區寧夏路 22-2 號 2F。
5. 員工宿舍：南投市同源路七街 18 巷 5 弄 11 號。

Terms of Engagement

This Assurance Statement has been prepared for Shuang Bang Industrial Corp.

LRQA was commissioned by Shuang Bang Industrial Corp. (hereafter referred to as the “Shuang Bang”) to assure its GHG Inventory Report of Shuang Bang for the calendar year 2024 (hereafter referred to as the “GHG Inventory Report”).

The GHG Inventory Report relates to direct GHG emissions, energy indirect GHG emissions and other indirect GHG emissions. Shuang Bang's geographical boundary includes the operations and activities relevant with Application development, coating and processing of fabric. & Design of production process and development, manufacture of oligomer, resin, pellet, film, sheet of polymer, organic diamine compound, and polymethyl methacrylate (PMMA). the associated facilities and equipment as set out in the following GHG Inventory Report. The GHG emissions have been consolidated using operational control approach.

Year 2024 GHG Inventory Report: The Shuang Bang Industrial Corp., dated 11 Dec.2025, 2nd Edition.

The Shuang Bang Industrial Corp.:

1. No. 3, Yongxing Rd., Nantou City, Nantou County 540029, Taiwan
2. No. 155, Renhe Rd., Nantou City, Nantou County 540027, Taiwan
3. No. 101, Nangang 3rd Rd., Nantou City, Nantou County 540029, Taiwan
4. 2F., No. 22-2, Ningxia Rd., Datong Dist., Taipei City 103019, Taiwan

5. No. 11, Aly. 5, Ln. 18, 7th St., Tongyuan Rd., Nantou City, Nantou County 540027, Taiwan

管理責任

双邦實業股份有限公司的管理階層對本溫室氣體盤查報告之準備、宣告和遵循 ISO 14064-1:2018 準則以及揭露的數據和資訊維持有效的內部控管負責。LRQA 的責任為依據我們與双邦實業股份有限公司間的合約執行查證。

最終，溫室氣體盤查報告已由双邦實業股份有限公司所核准並由其負責。

Management Responsibility

Shuang Bang's management was responsible for preparing the claim, GHG Inventory Report and conformity with the criteria of ISO14064-1:2018 and for maintaining effective internal controls over the data and information disclosed. LRQA's responsibility was to carry out an assurance engagement on the GHG Inventory Report in accordance with our contract with HCM .

Ultimately, the GHG Inventory Report has been approved by, and remains the responsibility of Shuang Bang.

LRQA 的方法

LRQA 查證已依循 ISO 14064-3:2019 (溫室氣體主張之確證與查證附指引之規範)，以提供對双邦實業股份有限公司符合 ISO 14064-1:2018 (組織層級溫室氣體排放與移除之量化及報告附指引之規範)所準備的溫室氣體盤查報告之類別一、二之合理保證查證以及類別三、四之有限保證等級查證。

為作成結論，本保證以抽樣方式執行並涵蓋下列的活動：

- 依溫室氣體盤查報告中所界定的設施設備，進行現場查訪；同時審查與溫室氣體排放數據及資料管理相關的過程；
- 訪談組織中對於相關溫室氣體排放數據與紀錄管理與維持之權責人員；
- 查證報告排放類別之重大性原則。
- 查核來自於環境部之相關係數與 IPCC 2021 年第六次評估報告之 GWP 值；
- 查證類別一與類別二的歷史數據記錄及資料來源；
- 查證類別三之上游原料(採購重量的前 80%)的陸地及海運運輸、員工通勤、商務旅行以及一般廢棄物運輸之活動數據；以及
- 查證類別四在主要原物料(採購重量的前 80%)，能資源上游排放及一般廢棄物處理；

LRQA's Approach

Our verification has been conducted in accordance with ISO 14064-3:2019, *Specification with guidance for validation and verification of greenhouse gas assertions'* to provide reasonable assurance for Categories 1 and 2 and limited assurance for Categories 3 and 4 that the GHG data as presented in the GHG Inventory Report has been prepared in conformance with ISO 14064-1:2018, '*Specification with guidance at the organizational level for quantification and reporting of greenhouse gas emissions and removals'*' .

To form our conclusions the assurance was undertaken as a sampling exercise and covered the following activities:

- conducted site tours of the facilities, as defined in the GHG Inventory Report, and reviewed processes related to the control of GHG emissions data and records;
- interviewed relevant staff of the organization responsible for managing and maintaining GHG emissions data and records;
- Confirmed significant criteria on reporting of emission categories.

- Verified emission factors sourced from MOENV and the Global Warming Potentials (GWPs) from the Sixth Assessment Report of the Intergovernmental Panel on Climate Change 2021 (AR6) ;
- verified the historical GHG emissions data and records back to source for Categories 1 and 2;
- Verified at an aggregated level GHG emissions data for Category 3 from transportation of upstream raw material (The top 80% of the total annual purchase weight of raw materials), employee commuting transportation, business travel and waste transport; and
- Verification an aggregated level GHG emissions data for category 4 from products purchased (The top 80% of the total annual purchasing weight of raw materials), energy resources and general industrial waste treatment ;

查證等級及實質性

依據合約的協議，查證是在合理保證等級及5%的實質性等級(類別一與類別二)，有限保證等級及5%的實質性等級(類別三與類別四)下執行的，本查證意見基於此形成。

Level of Assurance & Materiality

In accordance with our contract agreement, the assurance was conducted at a reasonable level of assurance at a materiality of 5% for Categories 1 and 2 and at a limited level of assurance at a materiality of 5% for Category 3 and 4. The opinion expressed in this Assurance Statement has been accordingly formed.

LRQA意見

基於 LRQA 的方法，依溫室氣體盤查報告中揭露日曆年西元 2024 年度之全部直接及能源間接的溫室氣體(類別一與類別二)排放總量實質正確，其他間接溫室氣體排放(類別三與類別四)沒有任何情形引起我們注意到計算有實質不正確；溫室氣體盤查報告之準備也符合 ISO 14064-1:2018 (組織層級溫室氣體排放與移除之量化及報告附指引之規範)相關要求。

LRQA's Opinion

Based on LRQA's approach,

- The GHG emissions for Categories 1 and 2 disclosed in the Report as summarized in Table 1 below are materially correct.
- Nothing has come to our attention that would cause us to believe that the GHG emissions for Category 3 and 4 disclosed in the Report as summarized in Table 1 below are not materially correct.
- and that the GHG Inventory Report has been prepared in conformance with ISO 14064-1:2018.

Signed



Wayne Huang

Lead Verifier 主導查驗員

On behalf of LRQA Limited

CIT, No. 1, Yumen St.,

Zhongshan Dist., Taipei City, Taiwan.

台北市中山區玉門街 1 號 台北創新中心(CIT)

日期 Dated: 29 December 2025



Chiang-shan Chen

General Manager 總經理



Table 1. Summary of Shuang Bang Industrial Corp. GHG Inventory Report for the calendar year 2024

双邦實業股份有限公司 2024 年度永興廠溫室氣體清冊

Scope of GHG emissions(溫室氣體排放之範疇)	Tonnes CO ₂ e CO2 當量噸
Direct GHG emissions (Category 1) 直接溫室氣體排放	5,892.9561
Direct GHG emissions from the combustion of biomass (生質燃燒溫室氣體排放)	4,939.3774
Indirect GHG emissions from imported energy (purchased electricity) 輸入能源產生之間接溫室氣體排放(電力採購) (Category 2, Location-based 地區基礎)	4,242.3948
Indirect GHG emissions from transportation (Category 3) 由運輸產生之間接溫室氣體排放	303.6708
Indirect GHG emissions from products used by the organization (Category 4) 由組織使用的產品所產生之間接溫室氣體排放	4,684.0385
Indirect GHG emissions associated with the use of products from the organization (Category 5) 與組織的產品使用相關連之間接溫室氣體排放	Not Significant
Indirect GHG emissions from other sources (Category 6) 由其他來源產生的間接溫室氣體排放	Not identified

双邦實業股份有限公司 2024 年度仁和廠溫室氣體清冊

Scope of GHG emissions(溫室氣體排放之範疇)	Tonnes CO ₂ e CO2 當量噸
Direct GHG emissions (Category 1) 直接溫室氣體排放	2,565.7212
Direct GHG emissions from the combustion of biomass (生質燃燒溫室氣體排放)	2,335.6600
Indirect GHG emissions from imported energy (purchased electricity) 輸入能源產生之間接溫室氣體排放(電力採購) (Category 2, Location-based 地區基礎)	5,741.5430
Indirect GHG emissions from transportation (Category 3) 由運輸產生之間接溫室氣體排放	518.0398
Indirect GHG emissions from products used by the organization (Category 4) 由組織使用的產品所產生之間接溫室氣體排放	28,388.9415
Indirect GHG emissions associated with the use of products from the organization (Category 5) 與組織的產品使用相關連之間接溫室氣體排放	Not Significant
Indirect GHG emissions from other sources (Category 6) 由其他來源產生的間接溫室氣體排放	Not identified

双邦實業股份有限公司 2024 年度南崙廠溫室氣體清冊

Scope of GHG emissions(溫室氣體排放之範疇)	Tonnes CO ₂ e CO2 當量噸
Direct GHG emissions (Category 1) 直接溫室氣體排放	1.4173
Direct GHG emissions from the combustion of biomass (生質燃燒溫室氣體排放)	None
Indirect GHG emissions from imported energy (purchased electricity) 輸入能源產生之間接溫室氣體排放(電力採購) (Category 2, Location-based 地區基礎)	73.2653
Indirect GHG emissions from transportation (Category 3) 由運輸產生之間接溫室氣體排放	1.4667
Indirect GHG emissions from products used by the organization (Category 4) 由組織使用的產品所產生之間接溫室氣體排放	16.2726
Indirect GHG emissions associated with the use of products from the organization (Category 5) 與組織的產品使用相關連之間接溫室氣體排放	Not Significant
Indirect GHG emissions from other sources (Category 6) 由其他來源產生的間接溫室氣體排放	Not identified

双邦實業股份有限公司 2024 年度台北辦事處溫室氣體清冊

Scope of GHG emissions(溫室氣體排放之範疇)	Tonnes CO ₂ e CO2 當量噸
Direct GHG emissions (Category 1) 直接溫室氣體排放	5.4916
Direct GHG emissions from the combustion of biomass (生質燃燒溫室氣體排放)	None
Indirect GHG emissions from imported energy (purchased electricity) 輸入能源產生之間接溫室氣體排放(電力採購) (Category 2, Location-based 地區基礎)	3.6137
Indirect GHG emissions from transportation (Category 3) 由運輸產生之間接溫室氣體排放	7.9456
Indirect GHG emissions from products used by the organization (Category 4) 由組織使用的產品所產生之間接溫室氣體排放	2.0887
Indirect GHG emissions associated with the use of products from the organization (Category 5) 與組織的產品使用相關連之間接溫室氣體排放	Not Significant
Indirect GHG emissions from other sources (Category 6) 由其他來源產生的間接溫室氣體排放	Not identified

双邦實業股份有限公司 2024 年度宿舍區溫室氣體清冊

Scope of GHG emissions(溫室氣體排放之範疇)	Tonnes CO ₂ e CO2 當量噸
Direct GHG emissions (Category 1) 直接溫室氣體排放	2.0535
Direct GHG emissions from the combustion of biomass (生質燃燒溫室氣體排放)	None
Indirect GHG emissions from imported energy (purchased electricity) 輸入能源產生之間接溫室氣體排放(電力採購) (Category 2, Location-based 地區基礎)	5.4061
Indirect GHG emissions from transportation (Category 3) 由運輸產生之間接溫室氣體排放	Not Significant
Indirect GHG emissions from products used by the organization (Category 4) 由組織使用的產品所產生之間接溫室氣體排放	1.1655
Indirect GHG emissions associated with the use of products from the organization (Category 5) 與組織的產品使用相關連之間接溫室氣體排放	Not Significant
Indirect GHG emissions from other sources (Category 6) 由其他來源產生的間接溫室氣體排放	Not identified

Note 1: The 2024 national electricity emission factor was taken from the Taiwan BOE (Bureau of Energy) as published on 14 April 2025.

Note 2.: GHG emission figures above are being reported with four decimal places as required by Taiwan MOENV

備註 1: 以上溫室氣體排放引用能源署在 2025 年 04 月 14 日公佈之 2024 年度電力排碳係數作為外購電力之排放係數。

備註 2: 溫室氣體盤放數據相關小數點規定依據環境部規定執行。

This Assurance Statement is subject to the provisions of this legal section:

LRQA Group Limited, its affiliates and subsidiaries, and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

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