



**Annual Greenhouse Gas (GHG)
Emissions Report:**

**Hadley Industries Holdings Ltd
trading as**

Ultrasteel Products Ltd (UPL)

According to the Principles of ISO 14064-1

**Greenhouse gas emissions
resulting from the production of
cold rolled metal products**

Executive Summary

Ultrasteel Products Ltd is a subsidiary of Hadley Industries Holdings Ltd; a UK based, privately owned company, whose expertise is in the manufacture of cold rolled metal sections.

UltraSteel Products Ltd is based in the West Midlands, manufacturing building products for use within the dry lining industry, where finished goods are used in the construction of metal framed partition walls and ceilings, both in the UK and overseas.

We are committed to act responsibly in our obligation to maintain high standards and also regarding the principles of our stakeholders, whether customer, supplier or local community.

The environment is an important part of our philosophy, and that can be seen within the manufacture of our products. We seek to reduce through design, the material content of our products and, employ the Hadley Group patented UltraSTEEL® process where practicable. When applied to our products, this delivers equal strength from a lighter gauge material, resulting in a more cost-effective end product that is stronger and 'Greener by Design'; a model we are proud to promote.

We also recognise the life cycle impacts of our products and, carry out an annual assessment of our carbon footprint to monitor our emissions. FY2023-24 is the eleventh year that UltraSteel Products Ltd. has carried this out, with the results continuing to show that our most significant impact is due to the volume of steel used in our manufacturing process. Whilst the direct and indirect (energy) impacts are an important focus for the business, over 99% of our carbon emissions are 'embodied' impacts through our raw material use. This is also documented on the Environmental Aspect Evaluation to ensure broader management commitment.

The construction products sector in the UK and overseas is evolving and there is a greater demand for product transparency from clients, specifiers and contractors alike. Life Cycle Assessment (LCA) results can help them to make more informed choices about products with these increasingly recognised in building level sustainability assessment schemes like BREEAM and LEED. The output of these LCA studies can be presented as an Environmental Product Declaration (EPD) which can be externally verified to give even greater assurance to decision makers.

This carbon footprint study has been compiled using life cycle assessment methods and is used to strive for continual improvement of our performance in respect of our life cycle environmental impacts.

1. Introduction

1.1 The company

UltraSteel Products Ltd is a subsidiary of Hadley Industries Holdings Ltd; a UK based privately owned company, based in Smethwick, West Midlands whose expertise is in the manufacture of cold rolled metal sections.

UltraSteel Products Ltd (UPL) manufactures building products for use in the dry lining industry.

UPL is covered by an environmental management system (EMS) compliant with ISO 14001:2015 and a quality management system compliant with ISO 9001:2015. The company is also covered by a Health and Safety Policy that follows the principles of ISO 45001.

1.2 The product

Dry lining cold rolled products are produced in Smethwick, West Midlands. Here the Hadley Group patented UltraSTEEL® process is employed, which provides dry lining profiles made using lighter gauge steel that is more cost-effective from a raw material perspective.

All dry lining cold rolled products produced by UltraSteel Products Ltd are compliant with BS EN 14195: 2014 – Metal framing components for gypsum board systems. Definitions, requirements and test methods.

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2. Greenhouse gas emissions

Greenhouse gas (GHG) emissions are largely responsible for climate change and as such local, national and international policy has driven many organisations to take responsibility for managing and reducing their GHG emissions. These emissions may occur directly through a company's operations, or indirectly through the use of electricity and/or other sources of purchased power, and in their upstream and downstream supply chains.

UPL conducts an assessment of its GHG emissions for a 12-month period on an annual basis according to the methodology set out in ISO 14064-1 *Greenhouse gases – Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals*. This assessment has enabled UPL to differentiate between direct (scope 1) and indirect (scope 2 and scope 3) emissions that are produced as a result of its production processes, and as such can be used to inform objectives, targets and strategies to further reduce these emissions.

A number of assumptions have also been made with regards to the data; these assumptions are highlighted in each section. Primary data has been used where possible, and much of this data has been sourced from UPL's existing management systems.

3. Scope of Analysis

UPL has conducted a 'cradle-to-gate' assessment of its annual greenhouse gas emissions. This includes all emissions from all processes owned or controlled by the organisation, use of all electricity and gas on site, emissions related to extraction of raw materials, and all processes upstream of the organisation.

3.1 Organisational Boundary

Based on EN 15804, *Sustainability of construction works: Environmental product declarations – Core rules for the product category of construction products*, this study covers modules A1 to A3 as set out in this standard. In relation to the principles of ISO 14064-1 UPL consolidates its facility level GHG emissions through the **equity share** approach. This is due to the co-location of other Hadley Group activities at the Gaitskell Way site in Smethwick, Birmingham. There are seven production bays at Gaitskell Way all operating in a similar manner and with similar outputs; three of these bays are operated by UPL with the other four bays operated by other Hadley Group companies. Due to the shared site facilities a factor of 3/7 is applied for gas and electricity usage as they are metered at overall site level.

- **Direct emissions:** Include all emissions from sources owned and controlled by UPL (scope 1 emissions). This includes all processing and manufacturing activities, and use of machine and plant.
- **Energy indirect emissions:** Use of all electricity on site (scope 2 emissions).
- **Other indirect emissions:** Upstream processes such as raw material extraction and transportation of raw materials to UPL, and other value chain emissions, such as business travel, and waste disposal.

Sources of GHG emissions include energy and fuel streams, embodied impacts of imported materials and other associated sources as identified in section 4.3 to 4.6.

Primary data has been used for direct and indirect emissions (energy). Appropriate conversion factors have been sourced from credible databases. The calculations and data are shown in spreadsheet UPL RS 004. Conversion factors have been updated to the 2023 edition of the report.

The base year for this GHG emissions study is 1st April 2023 – 31st March 2024.

GHG inventory quality management (as per clause 6 of ISO 14064-1) is maintained through use of primary energy data from annual bills. Accurate material usage data is maintained as part of the quality management system.

This is the eleventh annual GHG emissions report which has been compiled for UPL. The total, direct, and indirect (energy and others) GHG emissions figures will be made publically available to stakeholders via the Hadley Group website, as in previous years.

4. Data Reporting

Raw data was collected over the course of the period from 1st April 2023 to 31st March 2024. Conversion factors are then applied to the data so that GHG emissions (expressed as tonnes of CO₂ equivalents; tCO₂e) can be derived.

4.1 Raw Materials

All deliveries are transported via road to site (transport emissions calculated under section 4.3).

Table 1 shows the raw materials purchased and delivered for use at site. The JRC European Life Cycle Database¹ was used to determine tonnes of equivalent CO₂ per tonne material (t CO₂e/tonne) for the general steel used by UPL (hot dip galvanized)².

Table 1: Raw material data.

Raw Material	Material Type	Total purchased (tonnes)	EF/kg	tonnes CO ₂ e
Steel	General Steel (UK Typical)	42492	2.76	110055
Rubber	General Rubber	15.70	3.34	52
Adhesive	General Adhesive	0.832	3.34	3
Ink and solvents	General Ink	3.427	2.1	7
		42512	TOTAL	110117

4.2 Energy

UPL uses both gas and electricity at its production site that is certified as being 100% renewable energy. This will enable us to report zero emissions within our Scope 2 reporting for energy next year. The data for gas and electricity usage includes operation of premises as well as use of machinery. Table 2 shows the utility usage and the derived CO₂e emissions, as specified by Defra UK Government conversion factors, for the Gaitskell Way site. This forms part of UPL's scope 3 emissions declaration.

The total amount of CO₂e produced from utility usage is deduced to be **250.9** tonnes.

¹ Joint Research Centre; <http://epclca.jrc.ec.europa.eu/ELCD3/sourceList.xhtml>

² Taken from the 2023 World Steel Association LCA Methodology report.

Table 2: Energy/Fuel usage.

	Annual Consumption (kWh)	Scope	EF/unit	tonnes CO ₂ e
Electricity Use (kWh)	673,636	Scope 2	0.20707	139.5
Electricity transmission/distribution	673,636	Scope 3	0.01792	12.07
Natural gas use (kWh)	610,536	Scope 1	0.18256	111.5
LPG (FLT Fuel)	0	Scope 3	0.21419	0.00
TOTAL				263.07

4.3 Transport

This section considers emissions resulting from transportation of raw materials to site all from UK-based stockholders. Use of transport on site is considered in the previous section (natural gas use by FLT has now ceased as the forklift fleet was switch to Lithium Ion in 2022). All deliveries are transported via road to the Gaitskell Way site and all delivery vehicles arrive on site full and leave empty.

The direct emission factor for articulated lorries used in this study is 1.213870kg CO₂e per mile.

Materials listed in table 4 were delivered by van and as such emissions for these materials have been calculated by using the emissions factor of the average diesel van; 0.37268 CO₂e, as per the Defra factors.

The total footprint resulting from road transportation of inbound constituent materials is 39.19 tonnes CO₂e (please see tables 3 and 4 for details). This forms part of UPL's scope 3 emissions declaration

Table 3: Transport data for UltraSteel Products Ltd (material transported via articulated lorry)

Supplier/Location	Delivery Distance (miles)* return journey	Total journeys	EF /mile	tonnes CO ₂ e
Camtrex Ltd	20	370	1.213870	8.983
Meridian Metal Trading Ltd	14	192	1.213870	3.263
Steel & Alloy Processing Ltd	2	80	1.213870	0.194
Steel Processing (Midlands) Ltd	32.8	67	1.213870	2.668
The Davro Iron & Steel Co Ltd	17	639	1.213870	13.186
USS Ltd	17.8	94	1.213870	2.031
Arcelor	19.6	71	1.213870	1.689
Tata	22.8	225	1.213870	6.227
TOTAL				38.24

Table 4: Transport data for UltraSteel Products Ltd (material transported by light commercial vehicle)

Supplier/Location	Delivery Distance (miles)*	Total journeys	EF /mile	tonnes CO ₂ e
UK Rubber & Plastics	6.9	15	0.37268	0.04
Interlock Adhesives	124	2	0.37268	0.09
Xact	95	23	0.37268	0.81
			TOTAL	0.95

4.4 Operation of Premises

All emissions relating to the operation of the premises (factory and offices) have been covered in section 4.2, as gas and electricity figures used have already considered these emissions.

4.5 Waste

Waste from all processes (including oil changes for plant) is collected by locally based contractors (table 5).

Table 5: Waste collections

Waste Type	Distance (miles)	Visits per Year	EF /mile	tonnes CO ₂ e
General	6.8	92	1.3247	0.83
Metal	2.2	186	1.3247	0.54*
Wood	11.6	13	1.3247	0.20
Hazardous waste	14	54	1.3247	1.00
Cardboard etc.	6.8	23	1.3247	0.21
Sanitary	24.6	13	1.3247	0.42
			TOTAL	3.20
			UPL 3/7	1.36

Transport phase

In total, waste contractors visited site a total of 381 times in the period stated in section 4, a total distance of 2418 miles (return journeys included where appropriate). The calculations used to derive this figure are based on return trips between the waste contractor's depot and the Gaitskell Way site. In practice, some

waste types are collected as part of a waste contractor's collection run (i.e. general waste and paper), and so it may be that the footprint associated with transport of waste is overstated. However, this is difficult to calculate and so the assumptions used here are deemed to be the most reasonable.

Using the emission factors listed above this produces 3.20 tonnes of CO₂e. This however is for the whole site; UPL operates out of three of the seven bays on the Gaitskell Way site, so this figure is multiplied by 3/7 to derive UPL's contribution.

**Steel scrap is based on a 40/30/30 percentage split between UPL and the two other Hadley Group businesses operating in Bays 1-4*

This gives a final result of 1.36 tonnes CO₂e and which forms part of UPL's scope 3 emissions declaration.

4.6 Business travel

Emissions related to business travel have been included in UPL's GHG emissions calculation. This calculation is inclusive of all mileage by UPL employees covered by air (scope 3 emissions), and company car travel (scope 1 emissions). For FY2023/24 there were only a small number of business trips to customer depots. Since COVID restrictions were introduced during 2020, far greater use of Microsoft Teams meetings has been made within both Hadley Group and our customer's organisations. This has continued with great effect since restrictions ceased, resulting in only essential travel to visit customers being required.

Table 6: Business travel

Transport mode	Distance (miles)	Distance (km)	EF /mile	tonnes CO ₂ e
Air	0	-	0.15573	0.00
Sea	0	-	0.12952	0.00
Company car / small van.	0	805	0.27224	0.22
			TOTAL	0.22

4.7 Water

Emissions related to water supply have been used to determine emissions related to the supply of mains water to site. This forms part of UPL's scope 3 emissions declaration.

Table 7: Water usage

Total water used (m ³)	EF / kg CO ₂ e	tonnes CO ₂ e
415	0.149	0.0619

4.8 Air Conditioning

Emissions from the use of air conditioning systems have been included in UPL's GHG emissions calculation for the seventh time in 2023-24. Service reports for the three units show a total of 1.87kg of R410A refrigerant has been added to the systems. Using a Global Warming Potential (GWP) figure for R410A of 1924 results in a CO₂e emission of 3.60 Tonnes. This is a scope 1 fugitive emission.

5. Final Declaration

The final carbon footprint calculations for steel have been derived using all data discussed in section 4 of this manual. The final figures are stated below:

Scope 1	115.3	tonnes CO ₂ e
Scope 2 (Electricity)	139.5	tonnes CO ₂ e
Scope 3 (FLT Gas)	0.0	tonnes CO ₂ e
Scope 3 (Other)	110,440	tonnes CO ₂ e

Total GHG Emissions	110,695	tonnes CO₂e
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This organisational footprint is then normalised against a rolled production figure of 42248 tonnes for the study period to derive a GHG footprint/tonne of output as follows.

Total impact/tonne	2,620	kg CO ₂ e/tonne
Scope 1 impact/tonne	2.7	kg CO ₂ e/tonne
Scope 2 impact/tonne	3.3	kg CO ₂ e/tonne
Remainder	2,614.1	kg CO ₂ e/tonne