

# PROTECTING THE WORLD



# GREENHOUSE GAS EMISSIONS AND ENERGY EFFICIENCY

## Why does it matter?

We recognise that greenhouse gases are a major contributor to the climate crisis and are committed to managing and reducing the Group's emissions to support the Paris Agreement goals.

## What have we done?

In 2021 we committed to develop sciencebased targets to reduce our greenhouse gas emissions under the SBTi 'Business Ambition' for 1.5°C'. Having already established a baseline for Scope 1 and 2 emissions in 2020, we have been collating our baseline Scope 3 emissions during 2022 across the full scope of our organisation, in line with the International Greenhouse Gas Protocol guidance. This comprehensive baselining project, led by our Head of Sustainability working closely with our operating companies, has been very successful. We are pleased to report that we are on track to submit our targets ahead of the required SBTi deadline of August 2023.

Alongside measuring and understanding Scope 3, we have also further developed our carbon reduction plans and taken action to reduce Scope 1 and 2 emissions.

## Scope 1 & 2 Emissions (tonnes CO<sub>2</sub>e)

	2022	2021	2020
Scope 1	49,388	53,712	52,066
Scope 2	8,917	10,885	14,708
Total	58,305	64,597	66,774
Reduction %	10%	3%	n/a

The 10% reduction in our 2022 emissions has been driven by various local carbon reduction initiatives (such as installation of solar panels, switching forklift trucks to electric and use of HVO in place of diesel) as well as the disposal of France Galva. We were pleased that 94% of our UK electricity requirements were from renewable sources in 2022 and we are currently working with our US businesses on state by state plans to move towards renewable electricity in the next two to five years. A further breakdown of the Group's 2022 emissions is set out below:

2022 GHG Emissions







Consumption of natural gas for use in heating in the galvanizing process contributes 62% of the Group's total natural gas consumption and therefore the use of energy in the galvanizing process is a key focus area for the Group's carbon reduction plan. In 2022, we implemented energy efficiency measures in both our UK and US galvanizing operations including heat recovery systems, kettle covers and variable frequency drives, which will all contribute to our emissions reduction plan. In addition, during the year we investigated options to convert galvanizing natural gas burners to green electricity using our UK galvanizing site in Telford as a specific case study. Our findings, based on this case study, suggest that while electric gas burner technology is viable, further upgrades to UK electricity infrastructure or technology modifications will be required before this can be considered a feasible option and we continue to explore possible solutions. Alongside this, we are investigating the viability of hydrogen as a potential technology, working with Cadent and National Gas Transmission on their Hydrogen Valley project.

# Breakdown by Energy Type





# PROTECTING THE WORLD continued



# GREENHOUSE GAS EMISSIONS AND ENERGY EFFICIENCY continued

During 2022 we established a Group-wide Sustainability Forum with representatives from each of our operating companies, to collaborate on emissions reduction projects, share ideas and best practice and provide feedback on Group initiatives. We also produced a quarterly ESG newsletter to share updates with all employees across the Group, and held our first ESG Week in June to raise awareness of sustainability issues in a fun and engaging way.

We have continued to refine our costed plan which includes an assessment of the incremental capital, energy, carbon taxes and other operating costs to support our carbon reduction plan. The result continues to provide us with the confidence to commit to achieving a carbon net zero target for Scopes 1 and 2 by 2040. Our current expectations are that the financial impact of achieving this will not have a material impact on the growth prospects for the Group, with modest levels of incremental capital investment required.

#### What will we achieve?

In 2023 we will submit emission reduction targets for Scopes 1, 2 and 3 to SBTi. In 2021 we committed to achieve net zero for our Scope 1 and 2 emissions by 2040. The high-level steps we will take to deliver on this commitment are outlined below.



## Net Zero scope 1 and 2 emissions by 2040

#### 2020-2025 Implementation of galvanizing energy efficiency measures. Trial alternative galvanizing burner technologies.

Replace forklift truck gas oil with renewables UK to renewable electricity.

US start to move to renewable electricity 2026-2030 10 galvanizing plants to alternative burner technology Replace forklift truck LPG oil with renewables US moved to renewable electricity

# 2031-2035 5 galvanizing plants

to alternative burner technology Replace forklift

truck LPG oil with renewables

Remaining businesses moved to renewable electricity

#### 2036-2040 Remaining galvanizing plants to alternative burner technology Replace diesel in commercial vehicle with renewables



Each of our operating companies is also developing a local carbon reduction plan to address their own emissions. This includes Scope 3 which comprises 97% of our overall GHG emissions. During 2023 we will start to develop a more detailed strategy to reduce our Scope 3 emissions, now we have established our baseline.

## How will we measure progress?

We have invested in a sustainability software solution that we are using to record our GHG emissions. This will provide greater visibility of our emissions and allow us to set targets and measure performance at both a Groupwide and individual operating company level.

While our longer term commitment is to achieve net zero (for Scopes 1 and 2) by 2040, we are measuring our near-term progress through both reduction in our carbon intensity ratio and the number of tonnes of  $CO_2e$  removed. Our near-term targets and progress against these targets are set out opposite.





# TARGETS AND ACTUALS

Intensity Ratio (Market-based) 2022 Actual 0.07 2022 Target 0.09

0.08

2030 Target

No. of tonnes of  $CO_2$  removed (vs. 2020 – the base year)

2022 Actual 8,469 2022 Target 4,000

<sup>2025 Target</sup>

2030 Target 30,000



# PROTECTING THE WORLD continued



# SUSTAINABLE PRODUCTS



# Why does it matter?

The world's population is forecast to be c. 9.0bn by the late-2030s and this will drive extraordinary demand for climate friendly solutions in our daily lives. The Paris Agreement and the UN Climate Panel have defined specific sustainability goals and measures within areas such as access to raw materials, energy, and infrastructure. Our sustainable infrastructure products and services can play an important role in addressing the great challenges associated with increasing population and urbanisation, climate change and decarbonisation.

# What have we done?

During 2022, we have built on the work we did in 2021, and supported by a third party, Route 2, using an autonomous framework tool, we have assessed the sustainability and value to society of c. 55% of the Group's products and services by revenue. This analysis uses a Six Capitals framework to assess the value to society of our products, looking first at our supplier base, then our own manufacturing plants and finally, downstream when our products are in use. The Six Capitals are financial, human, intellectual, manufactured, natural and social and are used to understand how we create value for customers, investors, employees, communities and other stakeholders.

According to our analysis, for every £1 of revenue generated, our products contribute c. £2 of value to society. The results show a balanced distribution of economic, human, and environmental impacts. In each step of the value chain, the benefits of our business activities substantially exceed the costs to society.

Alongside this, our operating companies have started to undertake Life Cycle Assessments and we expect this to be an increasing focus area for our customers going forward.





## What will we achieve?

During 2023 we will continue to assess the sustainability impacts of our products, to provide our stakeholders confidence that our products have an environmental, or economic, or social benefit.

#### How will we measure progress?

We have disclosed the results of our 2022 work opposite and will continue to disclose work done to assess the sustainability impacts of our products on an annual basis.



Galvanizing's ability to optimise the durability of steel structures and components has important environmental, economic and social advantages.

There are high economic and environmental costs associated with the repeated painting of steel structures. These burdens can be significantly reduced by an initial investment in long term protection. The long term durability provided by galvanizing is achieved with a low environmental burden, especially when compared to the energy value of the steel it is protecting, meaning that galvanizing reduces the embodied carbon of construction.

A recent environmental lifetime study highlighted marked differences between two established corrosion prevention systems for steel structures. The hot dip galvanizing system had a lower environmental impact for a steel structure with a long service life, than a traditional paint system. Long service life and freedom from maintenance, the well known advantages of hot dip galvanizing, are the basis for these environmental benefits. In this example, as shown in the table, a saving of 57,100 tonnes of  $CO_2$  was achieved over the 60-year life of the car park.

Service Life (years)	Hot Dip Galvanized Steel Structure (kg CO <sub>2</sub> equivalent)	Painted Steel Structure (kg CO <sub>2</sub> equivalent)	Saving by hot dip galvanizing (kg CO <sub>2</sub> equivalent)
60	41,500	98,600	57,100
40	41,500	71,600	30,100
20	41,500	60,500	19,000

Extracted from Galvanized Steel and Sustainable Construction: Solutions for a Circular Economy, publ. EGGA (2021) and reproduced with permission of EGGA Galvanizers Association. For further information: www.galvanizing.org.uk/circular-economy