



ON TRACK FOR  
A SUSTAINABLE FUTURE

**ACT now for a  
sustainable future**

# COLAS RAIL

## PPN 06/21: CARBON REDUCTION PLAN



**PUBLISHED 30/11/23**

**WWW.COLASRAIL.CO.UK**

# EMISSIONS REPORTING



**ACT now for a sustainable future**

## COMMITTING TO ACHIEVE NET ZERO

Colas Rail UK Limited is committed to achieving Net Zero Greenhouse Gas (GHG) emissions by 2050 for all their UK Operations. In the medium term we have Science Based Targets in place to reduce all GHG emissions by at least 30% by the year 2030.

*\*The following disclosure relates to the emissions resulting from all Colas Rail UK activities, and not those from Colas Ltd activities, who operate as a standalone business within the Highways industry.*

## BASELINE EMISSIONS FOOTPRINT

Baseline emissions are a record of the greenhouse gases that have been produced in the past and were produced prior to the introduction of any strategies to reduce emissions. Baseline emissions are the reference point against which emissions reduction can be measured.

## BASELINE YEAR - 2019

The baseline emissions are from our annual reporting to Colas Group France. The reporting system uses the GHG reporting protocol for calculating Scope 1 and 2 Emissions.

Scope 3 emissions were not accurately calculated at this point, but we are now using actual data to calculate the Scope 3 categories shown for the 2022 reporting year, in accordance with the GHG Protocol Corporate Value Chain Standard.

A 2019 baseline for Scope 3 emissions will be included in next year's publication.



BASELINE YEAR EMISSIONS - 2019	
EMISSIONS	TCO2E
SCOPE 1	35,759
SCOPE 2	791
SCOPE 3 <sup>1</sup>	N/A
• PURCHASED GOODS AND SERVICES	N/A
• FUEL AND ENERGY RELATED ACTIVITIES (NOT INCLUDED IN SCOPE 1 & 2)	N/A
• WASTE GENERATED IN OPERATIONS	N/A
• UPSTREAM TRANSPORTATION AND DISTRIBUTION	N/A
• EMPLOYEE COMMUTING	N/A
• BUSINESS TRAVEL	N/A
• DOWNSTREAM TRANSPORTATION AND DISTRIBUTION	N/A
<b>TOTAL EMISSIONS (ONLY SCOPE 1 &amp; 2)</b>	<b>36,551</b>

1. Scope 3 GHG emissions need to be rebaselined based on the current reporting methodology. This will be completed by the next publication

REPORTING YEAR EMISSIONS - 2022	
EMISSIONS	TCO2E
SCOPE 1	29,318
SCOPE 2	371
SCOPE 3 (INCLUDING CATEGORIES BELOW)	78,235
• PURCHASED GOODS AND SERVICES <sup>1</sup>	66,978
• FUEL AND ENERGY RELATED ACTIVITIES (NOT INCLUDED IN SCOPE 1 & 2) <sup>2</sup>	7,092
• WASTE GENERATED IN OPERATIONS	1,479
• UPSTREAM TRANSPORTATION AND DISTRIBUTION	1,443
• EMPLOYEE COMMUTING	956
• BUSINESS TRAVEL	288
• DOWNSTREAM TRANSPORTATION AND DISTRIBUTION <sup>3</sup>	0
<b>TOTAL EMISSIONS</b>	<b>107,924</b>

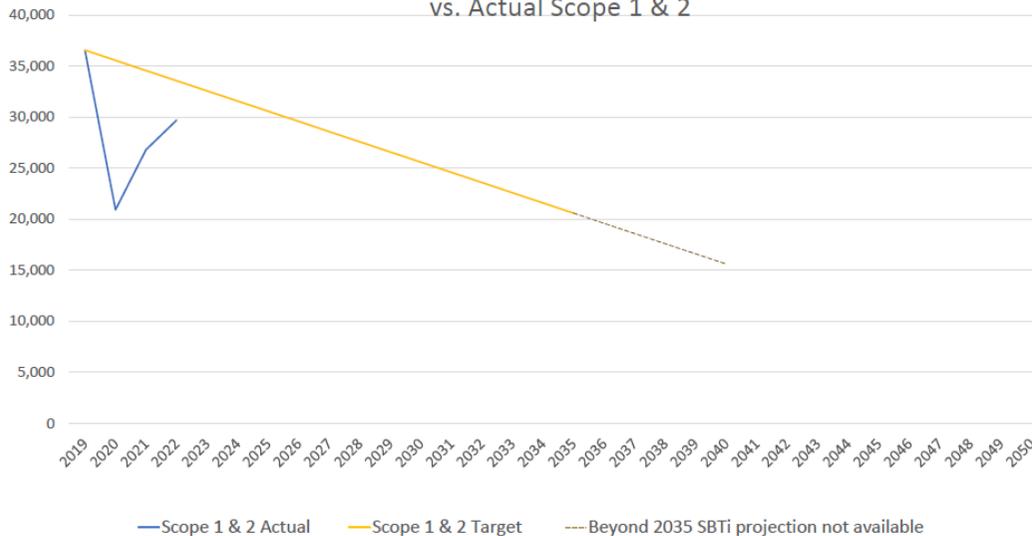
1. Measured for main purchased Goods and Services. Does not yet include the full suite of data for this category. Associated transportation and distribution only based on these main goods.
2. This relates to the emissions from extraction, refining and transportation of raw materials used for fuel/electricity.
3. Emissions for this category are assumed to be zero, as Colas Rail does not usually distribute products to customers through a 3rd party.

# EMISSION REDUCTION TARGETS

Colas Group (globally) are signed up to the Science Based Targets initiative (SBTi) with fully validated targets of a 30% reduction in absolute Scope 1 and Scope 2 GHGs, and a 30% absolute reduction in Scope 3 GHG emissions by 2030 (from the 2019 baseline year).

This is based on the “well below 2C” climate scenario. As part of Colas Group, Colas Rail UK are automatically signed up to meeting this target.

**GHG Emissions Reduction: Projection vs. Actual Scope 1 & 2**



- Scope 3 GHG emissions are not included in the above graph as they need to be rebaselined based on the current reporting methodology. This will be completed by the next publication.
- Our Freight and Plant division accounts for 87% of the total Scope 1 and 2 emissions. In 2022, the revenue for this business increased by 9% compared to the 2021 reporting year. This explains why the GHG emissions have increased, albeit they are still below the SBTi target line.

# CARBON REDUCTION PROJECTS

The following are some of the key carbon reduction projects have been initiated since the baseline.

Some of the savings from these will not be reflected until Colas Rail UK's 2023 emissions declaration to be published in next year's PPN 06/21.

## LOW CARBON DESIGN PRINCIPLES



On our Parkhead Viaduct project, as part of the Midland Metro Alliance (MMA) Urban rail network extension programme we designed out the need to demolish and reconstruct the Viaduct. Instead opting for a refurbishment design which saved over 1500 tCO2e through the reduction in materials, such as concrete and steel.

## USE OF SUSTAINABLE "ALTERNATIVE" FUELS



The running of our Locomotive and On Track Machine services is by far the most significant impact within our Scope 1 emissions.

Whilst we believe that the long term solution to decarbonisation will be in the form of electrification, with support from net zero fuels (e.g Green Hydrogen), the financial and infrastructure challenges make it unlikely that major progress will be made before 2030.

Our short mid term solution is therefore to run these services on alternative sustainable fuels (such as HVO fuel). In 2023 we have saved c.136 tCO2e so far from running one Locomotive, four Tampers and a Kirow Crane on HVO fuel.

# CARBON REDUCTION PROJECTS CONT..

# CARBON REDUCTION ENABLERS

## SUSTAINABLE SITE WELFARE

On the Gloucester Area Signalling Programme (GASP), we delivered our first hydrogen fuel cell powered welfare site. The 8 week trialled powered 5 eco welfare cabins, as well as a remote EV charge point, saving 1.4 tCO<sub>2</sub>e.

We have also started to use the "best in class" full solar eco cabins, where there is no requirement for a diesel generator. We are planning to continue expanding the use of these on our sites in the coming years, with the potential to make significant Scope 1 GHG savings.



The following key enablers are now in place to help Colas Rail UK to achieve its net zero ambitions:

## KEY ENABLERS

- Climate Fresk Training Programme being rolled out to all managers
- Colas Group's Carbon Reduction e-learning being rolled out to all other staff
- Carbon champions network has been set up with representation from all business units
- Monthly meetings held with all carbon champions
- Detailed Climate Change and Energy Plan developed to cover until the end of 2025 with executive buy in
- Policy to make all Company Cars Electric or Plug in Hybrid (PHEV) 100% expected by the end of 2024
- Procurement system integration now being used for Scope 3 calculation covering goods and services
- Significant enhancement in supply chain engagement held first net zero suppliers conference in 2023
- Tender and contract review question sets updated to enable us to work with suppliers and increase their maturity levels in this area



## ENERGY EFFICIENT HEAT MATS

In our steel structure fabrication workshop in Manchester, we now use low voltage personal heat mats during the colder months, which has replaced the inefficient gas blowers.

This has saved about 20 tCO<sub>2</sub>e so far with capital investment paid back within a few months. This innovation received a "highly commended" award at the National Rail Awards 2023.



## SOLID OXIDE FUEL CELL INNOVATION

In partnership with G Volution Ltd, our freight team obtained funding through the Innovate UK First of a Kind (FOAK) competition, to fit a Solid Oxide Fuel Cell (SOFC) to power the auxiliary load of a Class 37 Locomotive. The 35 kW fuel cell replaced the diesel generator and ran on bio LPG to power the heating, and interior and exterior lighting for the locomotive.

This was our first major step in integrating fuel cell technology into our freight trains.



## ELECTRIC AND HYBRID POWERED FLEET

In 2021 we made a pledge that all new/renewed Company Cars would be Electric or Plug in Hybrid (PHEV). We have now reached 114 out of 122 cars that meet this requirement, and will be at 100% by 2024.

In 2024 we are also due to do some more longer term trials on new fully Electric Van models, as we tackle the challenge of fully decarbonising our Diesel Van Fleet.

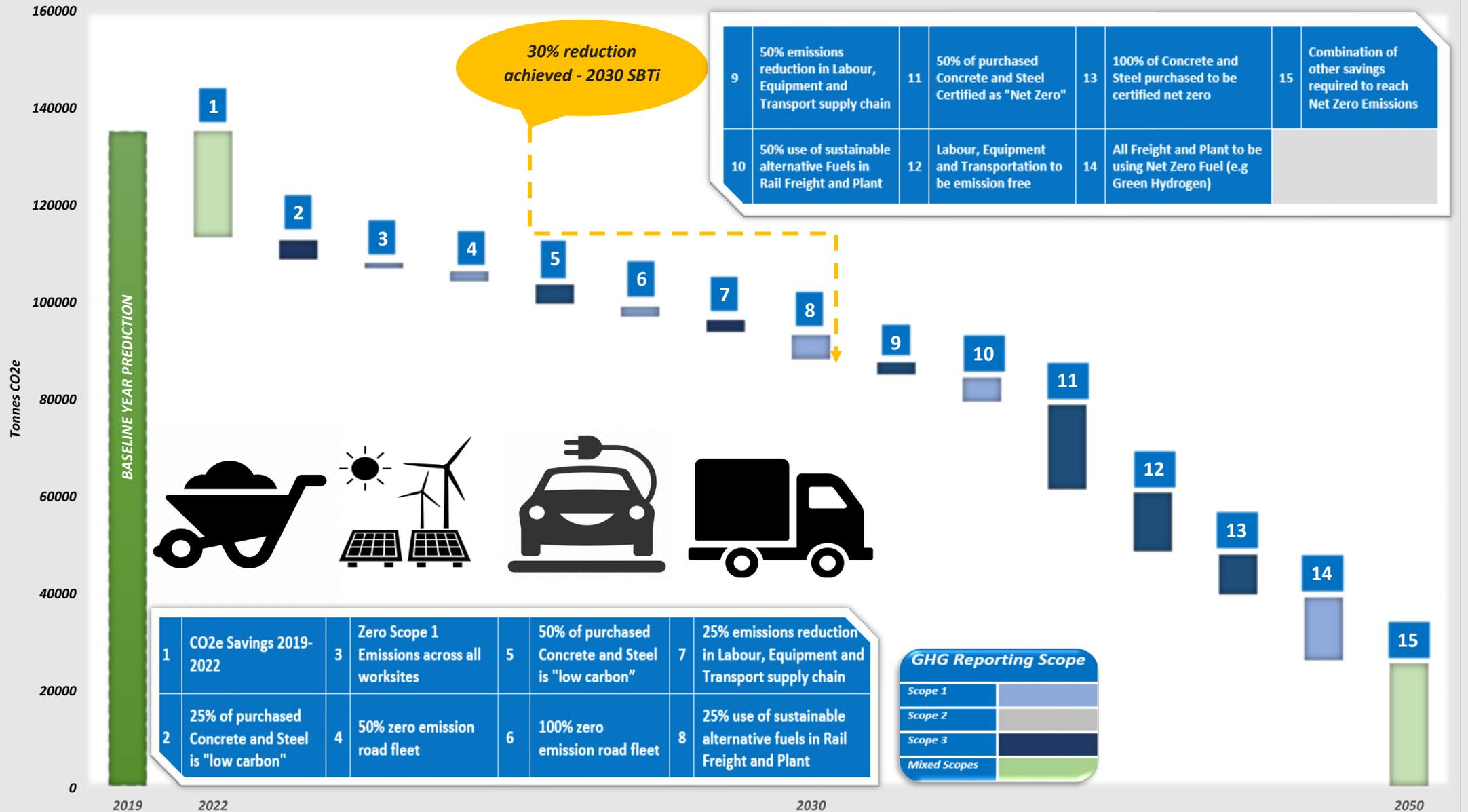


# NET ZERO CARBON WATERFALL ROADMAP

The waterfall roadmap to the right shows the key areas that we will target for carbon emission reductions, to achieve our net zero ambitions by 2050. The bars are the estimated emission savings that each milestone would achieve.

This does not currently consider longer term business growth; therefore, it shall be updated annually to reflect current and future business projections.

The baseline year prediction will be updated in next year's publication in accordance with the re baselined value for the 2019 year.



# DECLARATION AND SIGN OFF

This Carbon Reduction Plan has been completed in accordance with PPN 06/21 and associated guidance and reporting standard for Carbon Reduction Plans.

Emissions have been reported and recorded in accordance with the published reporting standard for Carbon Reduction Plans and the GHG Reporting Protocol corporate standard and uses the appropriate Government emission conversion factors for greenhouse gas company reporting Scope 1 and Scope 2 emissions have been reported in accordance with SECR requirements, and the required subset of Scope 3 emissions have been reported in accordance with the published reporting standard for Carbon Reduction Plans and the Corporate Value Chain (Scope 3) Standard.

This Carbon Reduction Plan has been reviewed and signed off by the board of directors (or equivalent management body).

**Signed on behalf of the Supplier:**



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**Date:** ..... 30th November 2023

<https://ghgprotocol.org/corporate-standard>

<https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>

<https://ghgprotocol.org/standards/scope-3-standard>