



ON TRACK FOR
A SUSTAINABLE FUTURE

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sustainable future

COLAS RAIL

PPN 06/21: CARBON REDUCTION PLAN



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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.

"Colas Group have recently formally increased their SBTi emission reduction target to 46.5% for Scopes 1&2 whilst Scope 3 remains the same at 30%. We are in discussions with group about how we need to contribute to this increased emission reduction target for Scopes 1&2."

"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 a procurement system methodology to calculate the Scope 3 categories shown for the 2024 reporting year, in accordance with the GHG Protocol - Corporate Value Chain Standard.

A 2019 baseline for Scope 3 emissions has been included in this publication, which is based on an overall spend calculation as it was before the new methodology was integrated.



EMISSIONS REPORTING

BASELINE YEAR EMISSIONS - 2019	
EMISSIONS	TCO2E
SCOPE 1	35,759
SCOPE 2	791
SCOPE 3 ¹	159,952
• PURCHASED GOODS AND SERVICES	N/A
• FUEL AND ENERGY RELATED ACTIVITES (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
TOTAL EMISSIONS (ONLY SCOPE 1 & 2)	188,503

1. Scope 3 GHG emissions have been baselined using an overall spend calculation, this methodology does not allow us to split into the Scope 3 categories, however it provides an overall baseline to work from.

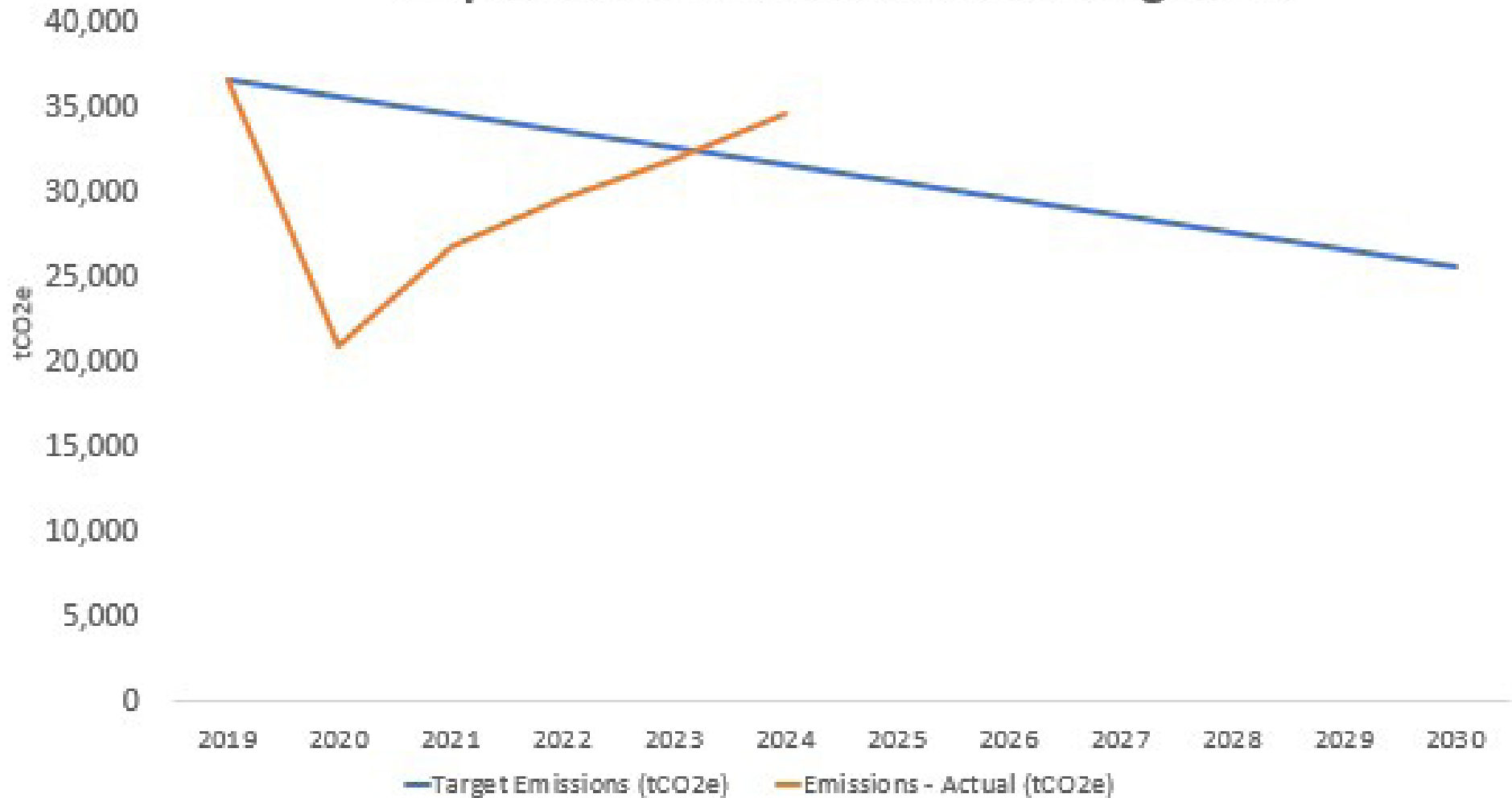
REPORTING YEAR EMISSIONS - 2024	
EMISSIONS	TCO2E
SCOPE 1	34,302
SCOPE 2	336
SCOPE 3 (INCLUDING CATEGORIES BELOW)	92,742
• PURCHASED GOODS AND SERVICES ¹	83,184
• FUEL AND ENERGY RELATED ACTIVITES (NOT INCLUDED IN SCOPE 1 & 2) ²	8,265
• WASTE GENERATED IN OPERATIONS	150
• UPSTREAM TRANSPORTATION AND DISTRIBUTION	NOTE 3
• EMPLOYEE COMMUTING	1023
• BUSINESS TRAVEL	120
• DOWNSTREAM TRANSPORTATION AND DISTRIBUTION ³	0
TOTAL EMISSIONS	127,380

1. Measured using the new Procurement System Methodology which uses raised orders to measure physical quantities of goods and spend on services
2. This relates to the emissions from extraction, refining and transportation of raw materials used for fuel/electricity.
3. Upstream transportation and distribution is incorporated into purchased goods and services due to way orders have been raised, this will be more clearly split out in the next publication.
4. 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 Rail UK 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

Scopes 1 & 2 Performance Vs SBTi target line



- The red diesel used in our Freight Trains and On Track Machines division accounts for 80% of the total Scope 1 carbon footprint, so carbon footprint reduction is heavily reliant on this division. In 2024, the revenue increased by 9%, which is consistent with a fuel usage increase, and explains why the carbon footprint has risen to above the target trend line.
- Despite this, multiple fuel efficiency trials have been undertaken in 2024, as well as more budget likely to be made available for alternative fuels in 2025 and onwards, which will enable us to get back below the target trendline despite further increased revenue performance.

CARBON REDUCTION PROJECTS SCOPES 1 AND 2

The following are some of the key carbon reduction initiatives that have been initiated in 23/24 which focus on reducing our Scope 1&2 emissions:

FUELACTIVE – FUEL EFFICIENCY

FuelActive is a simple innovation that changes the way fuel is picked up from a fuel tank, picking up from a higher level rather than the bottom of the tank. This ensures cleaner fuel is sent to the engine creating more efficient combustion.

This has been installed on all Rail Grinding and Milling fleet in 2024 and led to an average 7% fuel efficiency, saving c.274 tCO₂e in 2024. This is now being rolled out to the Tamper Machines and Locomotives in 2025 where we expect to see further benefits.



BEST IN CLASS WELFARE



Over 2024 we have tested four full solar eco cabins on various sites, which are one of very few on the market which are powered without the use of a generator. The only fuel they use is minimal for heating purposes, where it is negligible during the warmer months. Furthermore, these cabins also have rainwater harvesting which reduces the toilet servicing requirement by around 50% further saving transportation emissions. These cabins have saved c.30 tCO₂e in 2024.

The SolGen is another solar powered power generation technology we have used to power a number of welfare cabins on site. On the Thames Haven track renewal project this saved over 13tCO₂e.

In 2025 we strive to further increase the use of these solutions and strengthen the business case, as we aim to eliminate all fossil fuels for site welfare and tools by the end of 2027.

CARBON REDUCTION PROJECTS SCOPES 1 AND 2 CONTINUED

USE OF SUSTAINABLE “ALTERNATIVE” FUELS

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 Synthetic e-fuels), 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 some services on alternative sustainable biofuels (such as HVO fuel). In 2024 we have saved c.136 tCO₂e from running four Tampers and a Kirow Crane on HVO fuel.



SULNOX – FUEL EFFICIENCY

SulNOx is a fuel additive we have been trialling in 2024. It works as an emulsifier scavenging water and impurities from the fuel. This creates more efficient combustion with fuel efficiency benefits and a significant reduction in exhaust emissions.

Evaluations on Tampers and Locomotives are being finalised with a full roll out of this across all Freight and heavy rail plant expected in 2025.

RENEWABLE ELECTRICITY TARIFFS

Although our Scope 2 emissions are relatively small, we have managed to decrease these by 57% vs the baseline year. Much of this has been down to switching all our controlled electricity tariffs to fully renewable “green” electricity tariffs. This has resulted in a further saving of 106 tCO₂e in 2024 compared to 2023.

We have built a proposal to install direct solar at our main office location in Rugby which will provide c.45kWp initially and hope to get this approved in early 2025.



CARBON REDUCTION PROJECTS

SCOPE 3

The following are some of the key carbon reduction initiatives that have been initiated in 23/24 which focus on reducing our Scope 3 emissions:



LOW CARBON SLAB TRACK

On our Midland Metro Alliance (MMA) works we have been using a low carbon concrete slab track mix which uses synthetic polymer fibres rather than steel fibres to reinforce the concrete.

This has saved c.490 tCO₂e vs the original design mix in 2024.

REUSING OF OLE STEEL GANTRIES

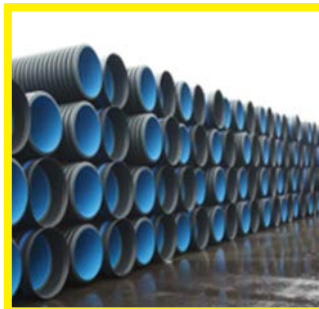
On the Old Oak Common HS2 enabling works the design team were able to identify four steel OLE structures that could be demobilised and reused on the project, to prevent them from being sent for recycling. Due to the high embodied carbon of steel this saved over 40tCO₂e vs the fabrication and transportation of new structures.

Steel is a key focus of our carbon reduction strategy as we constantly look for ways to reduce and replace with lower carbon options where available.



POLYPIPES DRAINAGE

On the Midland Metro Alliance (MMA) works this year they have replaced all stormwater drainage pipes and attenuation tanks with Polypipe 100% recycled polymer systems, which have a 75% reduction in CO₂e emissions vs standard HDPE drainage systems. In 2024 alone this has saved c.108 tCO₂e



CARBON REDUCTION ENABLERS

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 has now been delivered to 100% of all managers within the business
- A second Journey to Net Zero Supplier conference took place in 2024 acting as a highly successful enabler for enhancing supplier engagement.
- Carbon champions network is well established with representation from all business units – monthly carbon meetings
- Funded Carbon and Energy Reduction Plan developed as part of our ESG Strategy which covers our detailed commitments until the end of 2027
- Procurement system calculation now effectively being used for Scope 3 calculation covering goods and services – working group well established with procurement and finance to improve the measurement and accuracy of this data
- Tender and contract review question sets updated to enable us to work with suppliers and increase their maturity levels in this area



KEY SHORT-TERM COMMITMENTS

The following shows the key short-term commitments from our ESG Strategy, that are currently in place up to the end of 2027:

TOPIC	2025	2026	2027
REDUCING FUEL CONSUMPTION THROUGH IMPROVED EFFICIENCY	SulNox fully rolled out across Freight and Plant FuelActive Installations on Locomotives and Tampers	Completion of FuelActive Installations on Locomotives and Tampers	100% of all freight and plant to have an accurate fuel monitoring system installed
USING ALTERNATIVE FUELS	Increased use of alternative biofuels in Freight and Plant to 6%	Increased use of alternative biofuels in Freight and Plant to 8%	Increased use of alternative biofuels in Freight and Plant to 10%
TRANSITION TO ULTRA LOW EMISSION VEHICLES	33% of Vans to be Plug in Hybrid Electric Vehicles	66% Vans to be Plug in Hybrid Electric Vehicles	85% Vans to be Plug in Hybrid Electric Vehicles
REMOVING FOSSIL FUELS FROM OUR SITES	Ensure all Welfare Setups (>4 weeks) achieve an EPC rating of B or above	Ensure all Welfare Setups (>4 weeks) achieve an EPC rating of A	Ensure all welfare setups, tools and equipment to be fossil fuel free across all sites
LOW CARBON BY DESIGN	35% of Concrete based products to be certified as "low carbon" either through changing design mixes or using alternative products	35% of all steel-based products to be "low carbon" or using alternative lower carbon materials (e.g basalt, GRP) All Subcontract Packages to use at least 35% "low carbon" materials (by volume)	50% of all materials (including those within subcontract packages) to be "low carbon" (by volume)
LOW CARBON SUPPLY CHAIN	Fuel Efficiency Initiatives rolled out (where possible) across Rail Road Vehicle (RRV) suppliers - FuelActive and SulNOx	50% of All major HGVs deliveries be completed using sustainable alternative fuels to diesel All new Plant hire contracts to specify the use of alternative fuels where possible	30% of all hired plant to be running on alternative fuels 70% of all Labour Vehicle mileage to be Plug in Hybrid or Fully Electric 100% of all major HGV deliveries to be using sustainable alternative fuels to diesel

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: 20/1/25.....

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

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

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