

# PPN 06/21

## Carbon Reduction Plan

2023



**Supplier Name:** Alexander Dennis Limited

**Publication Date:** 19<sup>th</sup> December 2024

## Commitment to achieving net zero

Alexander Dennis Limited (AD) is committed to **reaching a target of net zero emissions across our UK operations by 2045**. The target aligns with the Scottish Government's Net Zero Roadmap which is five years ahead of the requirements set out in the standard Carbon Reduction Plan (CRP) guidance.

AD is at the forefront of providing a range of pioneering technology solutions to deliver significant fuel efficiencies and emission reductions within the public and private transport sector, supporting its customers in achieving their own climate reduction goals with the market's widest range of low and zero emissions products.

AD is a proud part of leading independent global bus and coach manufacturer NFI Group Inc. (NFI).

## GHG Emissions Footprint

AD's greenhouse gas (GHG) emissions footprint was calculated in accordance with the best practice methodologies set out within the GHG Protocol Corporate Standard<sup>1</sup>. The GHG emissions are categorised into *Direct* (Scope 1), *Indirect* (Scope 2) and *Other Indirect* (Scope 3) emissions.

In alignment with the requirements of Procurement Policy Notice (PPN)06/21<sup>2</sup>, AD's Carbon Reduction Plan reports on Scope 1 and 2 emissions along with five categories of Scope 3 emissions. The Scope 3 categories reported on in this CRP include:

- Category 4: Upstream transportation and distribution
- Category 5: Waste generated in operations
- Category 6: Business travel
- Category 7: Employee commuting
- Category 9: Downstream transportation and distribution

AD's GHG emissions have been tracked and reported on an annual basis since the 2019 baseline. Within this scope are emissions from AD's activities in the UK only.

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<sup>1</sup> <https://ghgprotocol.org/corporate-standard>

<sup>2</sup> <https://www.gov.uk/government/publications/procurement-policy-note-0621-taking-account-of-carbon-reduction-plans-in-the-procurement-of-major-government-contracts>

## Baseline Year: 2019

AD's baseline year was calculated for the period 1<sup>st</sup> January to December 31<sup>st</sup> 2019. AD continues to measure their GHG footprint on an annual basis to capture progress against its target of reaching net zero by 2045. *Table 1 gives AD's 2019 baseline emissions footprint, split by emissions scope*

**Table 1: 2019 Baseline GHG emissions footprint by scope and scope 3 category.**

2019 Baseline year emissions	
Emissions Category	Total Emissions (tCO <sub>2</sub> e)
Scope 1	6,267
Scope 2	3,223
Scope 3 (See breakdown below)	4,180
<i>Cat 4: Upstream transportation and dist.</i>	2,047
<i>Cat 5: Waste generated in operations</i>	50
<i>Cat 6: Business travel</i>	129
<i>Cat 7: Employee commuting</i>	1,954
<i>Cat 9: Downstream transportation and dist.</i>	NA <sup>3</sup>
<b>Total Emissions</b>	<b>13,670</b>

<sup>3</sup> Manufactured vehicles are driven directly to customers. Emissions from the fuel consumed in this activity are accounted for in Scope 1, therefore, there are no downstream distribution activities. Emissions from aftermarket freight deliveries are included upstream, this aligns with the GHG Protocol Scope 3 Guidance which states that distribution services paid for by the reporting company should be included in category 4.

## Current Emissions Reporting

AD will continue to update its CRP as stipulated in the PPN 06/21 guidance on an annual basis. The latest GHG emissions assessment for the reporting period of 1<sup>st</sup> January to December 2023 are included in table 2 below alongside the previous reporting year (2022) and the 2019 baseline for comparison purposes.

**Table 2:** AD's GHG emissions footprint for 2023 compared to the previous year (2022) and baseline (2019), split by emissions scope and scope 3 category

Emissions Reporting (Baseline to current reporting year)					
Emissions Category	Total Emissions (tCO <sub>2</sub> e)			% Reduction from previous year	% Reduction from Baseline
	2019 (Baseline)	2022	2023 (Current reporting year)		
Scope 1	6,267	3,549	3,979	+12%	-37%
Scope 2	3,223	1,462	1,542	+5%	-52%
Scope 3 (See breakdown below)	4,180	4,804	3,996	-17%	-4%
<i>Cat 4: Upstream transportation and dist.</i>	2,047	2,396	1,831	-24%	-11%
<i>Cat 5: Waste generated in operations</i>	50	75	70	-7%	+40%
<i>Cat 6: Business travel<sup>4</sup></i>	129	473	380	-20%	+195%
<i>Cat 7: Employee commuting</i>	1,954	1,860	1,714	-8%	-12%
<i>Cat 9: Downstream transportation and dist.<sup>5</sup></i>	NA	NA	NA	-	-
<b>Total Emissions</b>	<b>13,670</b>	<b>9,815</b>	<b>9,517</b>	<b>-3%</b>	<b>-30%</b>

<sup>4</sup> AD uses spend data to calculate their Business Travel emissions. Spend-based approaches are inherently more uncertain than alternative approaches which utilise actual distance or consumption data. This is one of the main factors behind the significant year-on-year variability which we have seen. AD intends to switch to a distance-based approach to calculating these emissions in the coming years.

<sup>5</sup> Manufactured vehicles are driven direct to customer. Emissions from the fuel consumed in this activity are accounted for in Scope 1, therefore, there are no downstream distribution activities. Emissions from aftermarket freight deliveries are included upstream, this aligns with the GHG Protocol Scope 3 Guidance which states that distribution services paid for by the reporting company should be included in category 4.

## Emissions Reduction Targets

AD United Kingdom is committed to making progress towards achieving net zero by 2045 from a 2019 baseline year. This aligns with the Scottish Government's net zero ambition for 2045.

### Carbon Reduction Modelling

AD's net zero targets are aligned to the Paris Agreement objective to limit global temperature increase to 1.5°C above pre-industrial levels. This requires AD to achieve at least an average annual 4.2% reduction of total operational and value chain emissions year-on-year up to 2045, relative to the baseline.

As such, AD has modelled its emissions reduction trajectory according to this minimum rate of reduction. This pathway is presented in comparison to AD's confirmed emissions footprint from the 2019 baseline to the current reporting year 2023 in figures 1 and 2 on the following page.

Figure 1 shows the carbon reduction projected for Scopes 1 and 2 when aligned with a 1.5°C pathway. On this pathway, AD's total GHG emissions will decrease by approximately 46% by 2030 compared to baseline. The bars overlying the emissions projections, represent the actual 2019 (baseline) to 2023 GHG emissions trajectory to demonstrate emissions reduction progress to date.

AD acknowledges that it is unlikely to be possible to reduce its gross emissions down to zero. Once AD has reached the point where they have achieved maximum possible abatement of their emissions, at minimum a reduction of 90% compared to baseline, AD will consider options such as offsetting the absolute emissions by investing in high-quality, verified carbon removal credits to reach the net zero goal.

AD's emissions reduction pathways have been modelled in accordance with the SBTi Standard for a 1.5°C-aligned Science-Based Target with a near-term 2030 target and a long-term 2045 net zero target.

### Business-as-Usual Modelling

In addition to the modelling described above, in 2020 AD modelled a business-as-usual (BAU) emissions scenario to guide its emissions reduction strategies. The BAU scenario forecasted AD's emissions growth in the fictional absence of any emissions reduction actions. It accounts for business growth in line with an average UK economic growth forecast and for forecasted decarbonisation of the UK electricity grid<sup>6</sup>. This BAU scenario showed the emissions gap between AD's forecasted emissions pathway and the 1.5°C-aligned emissions reduction pathway. This allowed AD to understand and plan the emissions abatement required to reach net zero by 2045.

Figure 1 shows the BAU scenario for scopes 1 -and 2 against AD's projected emissions reduction pathway.

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<sup>6</sup> <https://www.gov.uk/government/publications/valuation-of-energy-use-and-greenhouse-gas-emissions-for-appraisal>

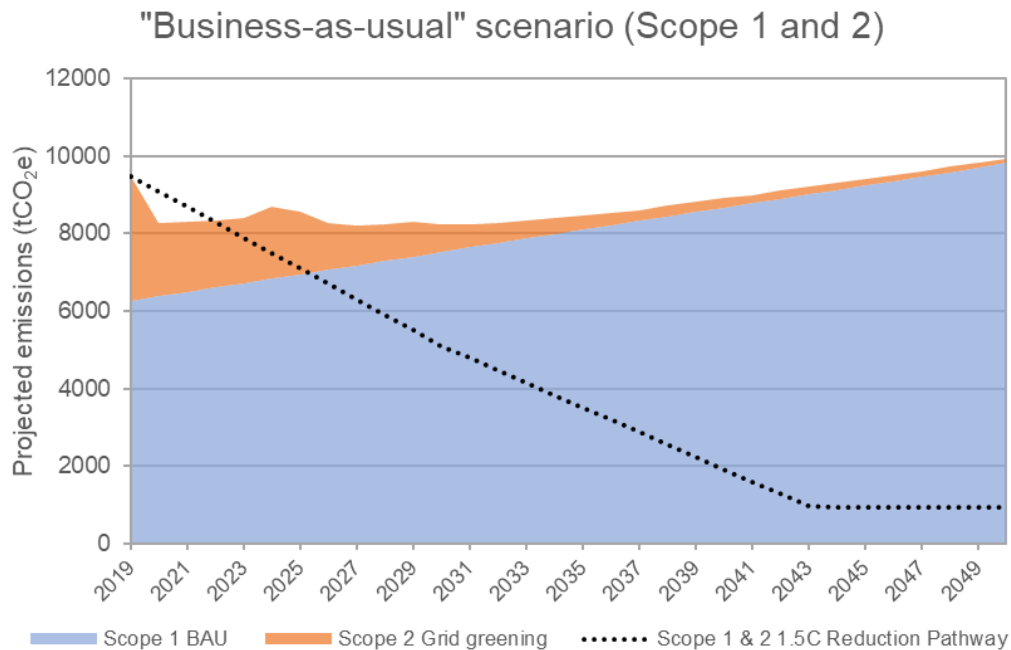


Figure 1: Business-as-usual scenario against AD's 1.5°C-aligned reduction pathway, modelled from 2019 baseline to 2050. Modelling conducted in 2020.

### Actual Versus Projected Emissions

Figures 2 and 3 show AD's progress against its projected emissions reduction pathways for scopes 1 and 2, and scope 3 respectively. Bars on the graphs display AD's actual footprints since the 2019 baseline, while the areas behind the bars show AD's 1.5°C-aligned reduction trajectory.

In 2020 and 2021, AD saw a significant reduction in total emissions against the 2019 baseline. This was a consequence of the global Covid-19 pandemic and the reduction in some operational activities during these periods. In 2021 emissions increased compared to 2020 as AD, and the UK economy, began its recovery from the pandemic. In 2022, AD's scope 1 and 2 emissions continued to fall relative to baseline, a result of AD's continuing GHG reduction initiatives towards its net zero target.

As demonstrated in Figure 2, AD's scope 1 and 2 emissions for 2023 remained ahead of its emissions reduction pathway. Yet, compared to 2022, scope 1 and 2 increased by 12% and 5%, respectively. For scope 1, this was due to rises in the consumption of natural gas, diesel and burning oil as a result of increased operational activity on-site. Meanwhile, despite a reduction in AD's electricity consumption, scope 2's growth was due to a rise in the grid emission factor. Nonetheless, deviations along the pathway are to be expected, and the overall trend remains in line with AD's net zero pathway.

### Scope 1 and 2 Emissions Reduction Progress

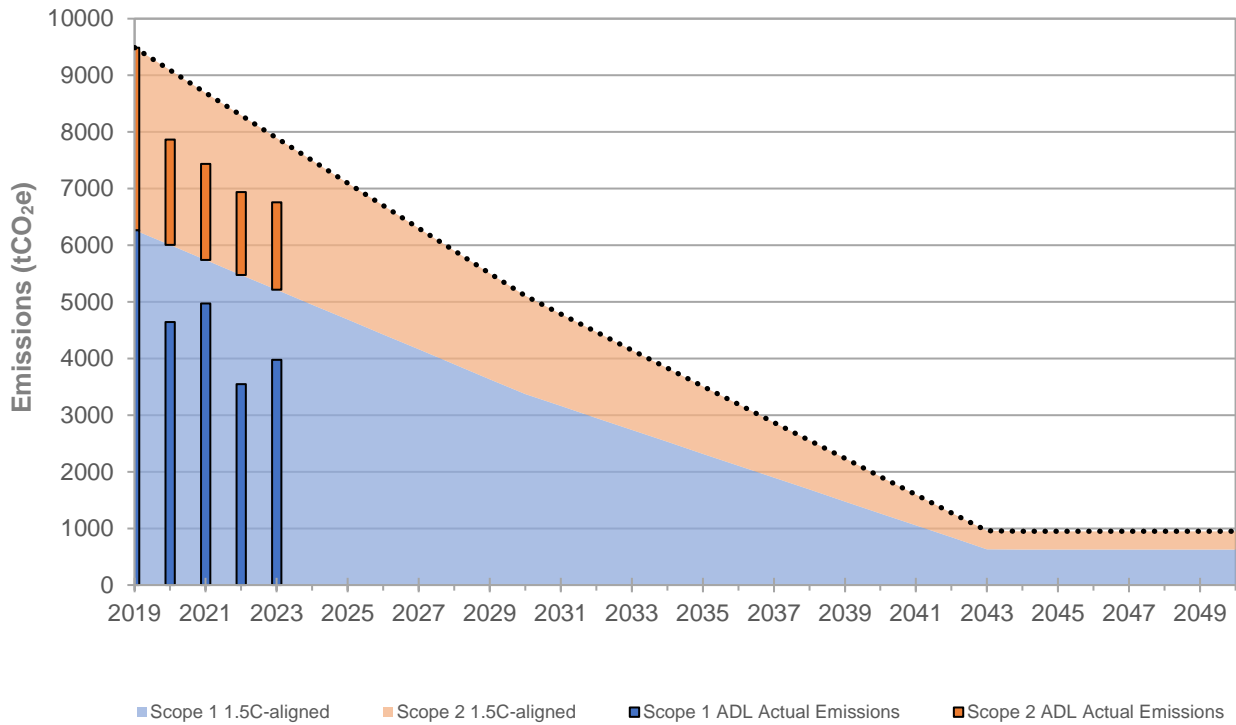


Figure 2: Targeted scope 1 and 2 emissions reduction pathways modelled from 2019 baseline to 2050.

### Scope 3 Emissions Reduction Progress

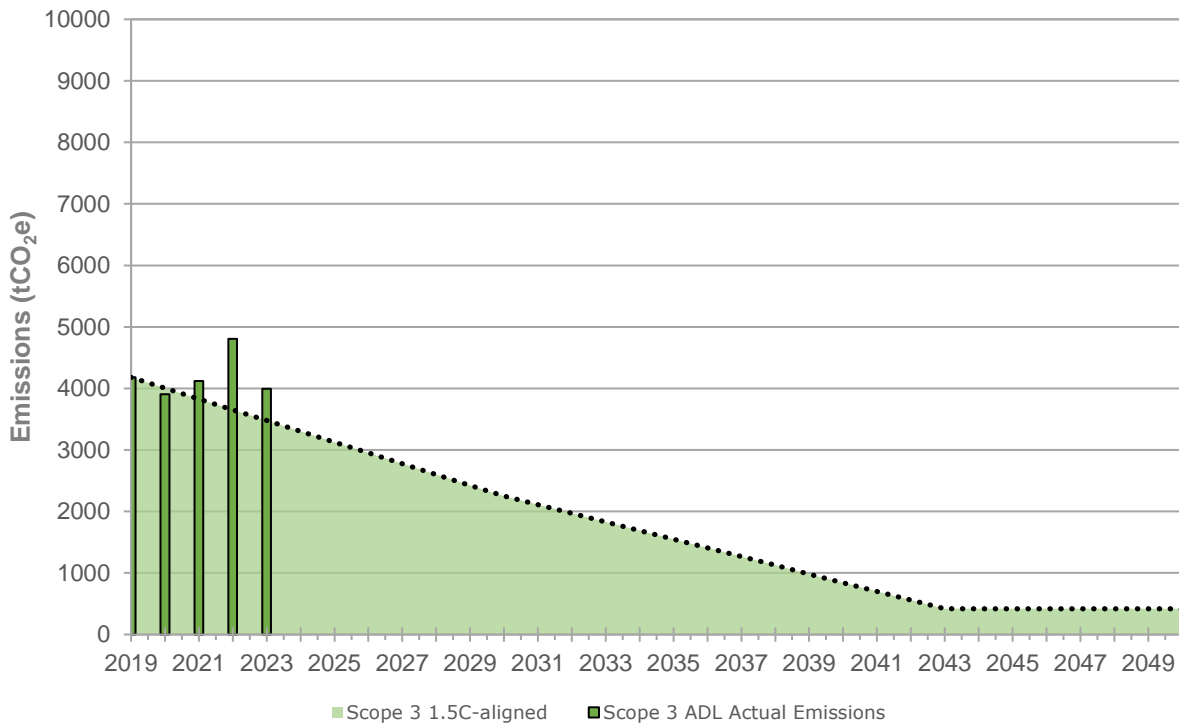


Figure 3: Targeted scope 3 emissions reduction pathway modelled from 2019 baseline to 2050. Emissions include five reported categories of Scope 3 emissions (Upstream Logistics, Waste, Business Travel, Commuting, Downstream logistics).

Figure 3 shows AD's value chain or scope 3 emissions for the five reported categories against the net zero trajectory. It shows a decrease of 17% from 2022 to 2023 in AD's indirect emissions. This decrease has resulted predominantly from significant reductions in business travel and upstream transport and distribution. Although the scope 3 emissions for 2023 remain above AD's emissions reduction pathway, the considerable decrease from 2022 represents strong progress towards the target.

AD will continue to monitor trends in these and other Scope 3 categories and develop initiatives to reduce these emissions in the future (see carbon reduction projects section).



## Completed Carbon Reduction Initiatives

### *Energy Efficiency*

Since 2019, AD has completed multiple initiatives to reduce emissions from electricity and gas used across their operational sites. Some of the highest impact initiatives are listed below, saving a total of 272 tCO<sub>2</sub>e.

- In 2019, AD completed investment grade energy audits to identify opportunities to improve energy efficiencies.
- In 2019, AD completed the installation of LED lighting systems, providing a reduction in electricity consumption of 382,740 kWh. This equated to a savings of 97.8 tCO<sub>2</sub>e within the Scope 2 baseline.
- In 2022, AD completed the installation of further LED lighting systems, providing a reduction in electricity consumption of 176,337 kWh, equating to 34.1 tCO<sub>2</sub>e (1.1% reduction versus the Scope 2 baseline).
- In 2023, further LED lighting installation provided an electricity saving of 355,131 kWh, equating to 74 tCO<sub>2</sub>e. Additionally, AD consolidated two of their office sites saving around 319,103 kWh of electricity, equating to 66.1 tCO<sub>2</sub>e.

### **Future Projects**

In the future, AD aims to implement further measures in line with the NFI Group business sustainability strategy and decarbonisation goals. AD will continue to explore opportunities to reduce Scope 1, 2 and 3 emissions.

### *Facilities Energy Efficiency*

AD aims to reduce Scope 1 and 2 emissions by evaluating its energy-intensive, inefficient and/or fossil fuel powered equipment and operational processes to explore and prioritise opportunities to replace these with newer, more efficient models, or those that run on greener fuels. AD recognises the importance of finding renewable solutions to help their energy efficiency targets. To support its commitment to net zero, AD aims to reduce its reliance on fossil fuels and will procure renewable energy contracts for 2025 onwards where possible for UK operations. In 2025, it is anticipated that all but one warehouse in AD's UK portfolio will be powered by renewable energy sourced contracts. Furthermore, AD will set internal scope 1 and 2 emissions reduction targets for 2025.

AD's cross-functional Energy Governance Committee meet monthly to review UK energy usage and identify and manage reduction activities. AD is currently implementing an Energy Management Framework, based on CIBSE TM46, across all UK sites, benchmarking its energy consumption and intensity against industry standards and driving energy reduction through continuous improvement activities. The Framework supports the setting of the abovementioned scope 1 and 2 reduction targets and provides a structure to help measure progress against them. Ongoing improvements through facility retrofitting efforts, consolidation and operational process design efficiencies will continue to be evaluated on an ongoing basis.

### *Improved Data Collection*

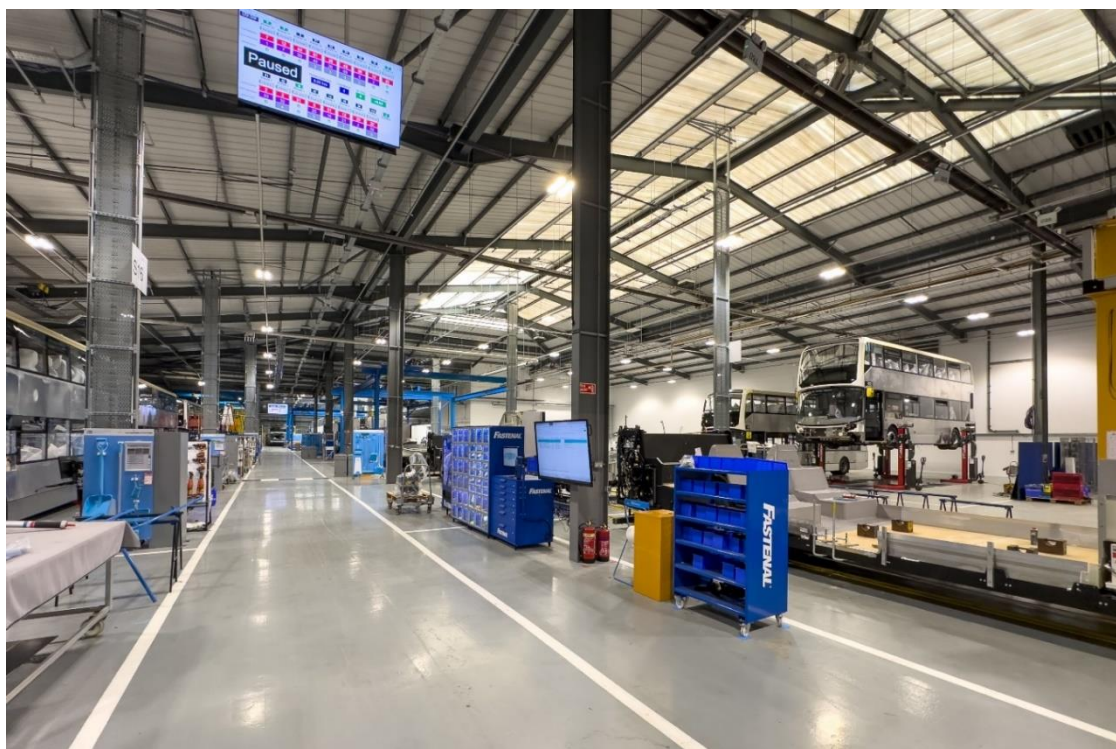
AD will continue to improve its measurement and reporting of carbon emissions. In 2020, AD worked with EcoAct, an external climate consultancy, to develop a tool to support the internal environmental data collection processes. Since then, AD has continued its work with EcoAct, ensuring data collection processes continue to improve year-on-year, and use their expert knowledge in calculating an emissions footprint that is aligned with the GHG Protocol Standards.

AD aims to upgrade all meters across its UK sites to Automated Meter Reading (AMR) technology, enabling the automatic collection of data on a half-hourly basis. With this enhanced data visibility, AD can effectively track energy use and identify high-energy operations in need of optimisation.

### *Carbon Footprint*

AD recognises the limitations and challenges of spend-based emissions accounting and aims to improve its emission footprint calculations by exploring how it can move away from a spend-based approach to calculating emissions. In 2024, AD will undertake a comprehensive project dedicated to calculating its scope 3 emissions associated with its entire value chain across the 15 categories, where considered to be in scope. This project will begin with a discovery phase to determine the best approach and methodology for measuring and managing the emissions associated with each category, prioritising actual data where available; otherwise, spend data will be used. This phase will be followed by calculations and benchmarking for all relevant categories to provide robust and transparent greenhouse gas data.

In addition, AD will undertake further analysis to identify future physical and transitional risks and opportunities to the business. The analysis work or framework selected will aim to optimise carbon reduction initiatives and ease the burden of climate change across the business.



## Declaration and Sign Off

This Carbon Reduction Plan has been completed in accordance with PPN 06/21 and associated guidance and reporting standards 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<sup>7</sup> and uses the appropriate Government emission conversion factors for greenhouse gas company reporting<sup>8</sup>.

Scope 1 and Scope 2 emissions have been reported in accordance with SECR<sup>9</sup> 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<sup>10</sup>.

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

**Signed on behalf of the Supplier:**



**Paul Davies**

President & Managing Director at Alexander Dennis Limited

19<sup>th</sup> December 2024

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<sup>7</sup><https://ghgprotocol.org/corporate-standard>

<sup>8</sup><https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>

<sup>9</sup> <https://www.gov.uk/government/publications/academy-trust-financial-management-good-practice-guides/streamlined-energy-and-carbon-reporting>

<sup>10</sup><https://ghgprotocol.org/standards/scope-3-standard>