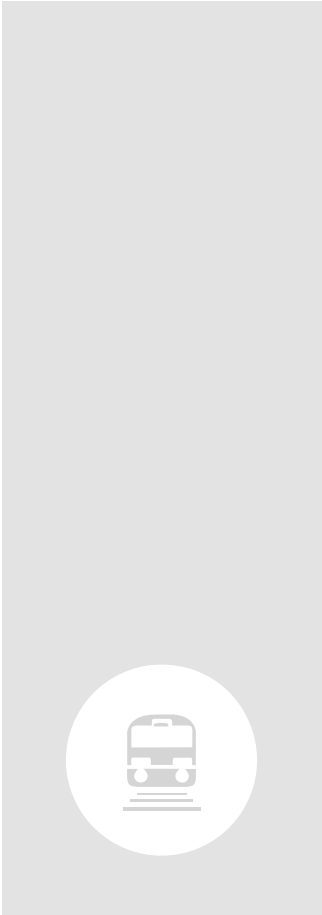
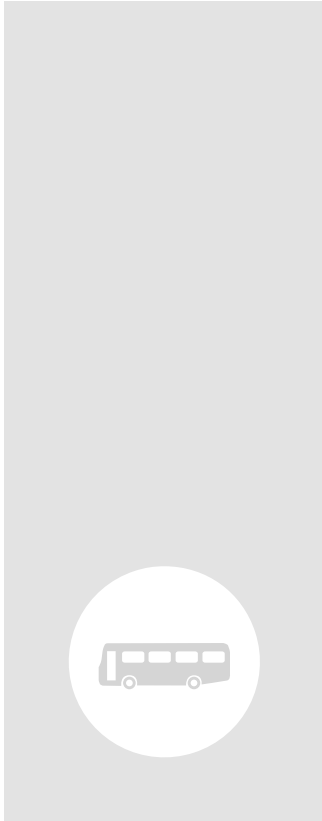
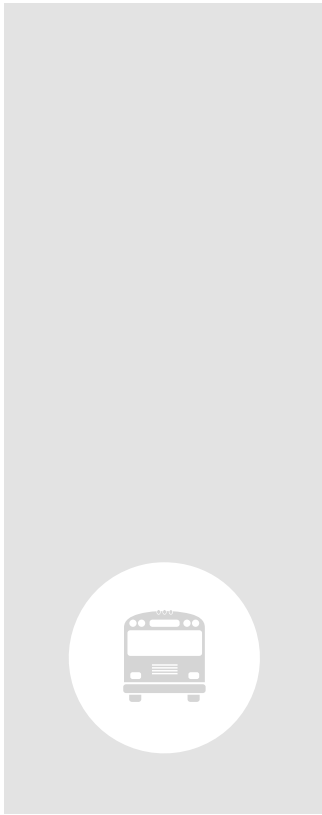
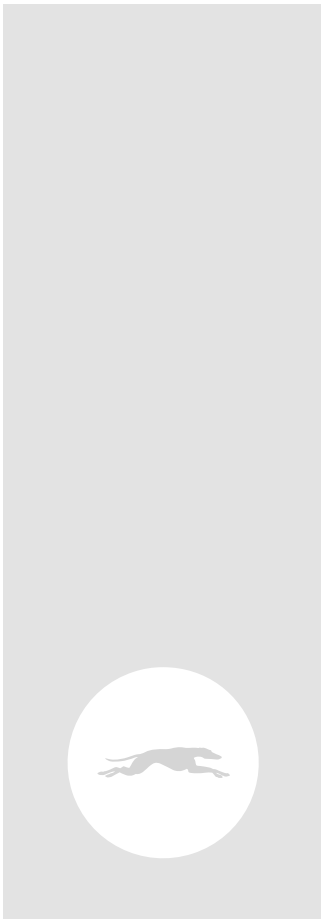
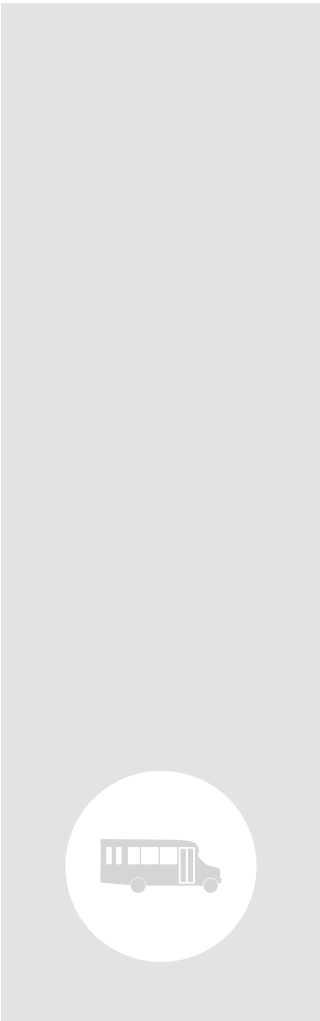


**Environmental  
Data Report 2020**



**FirstGroup plc**  
Annexe to the  
Annual Report and  
Accounts 2020

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**We provide easy and convenient mobility, improving quality of life by connecting people and communities.** FirstGroup is a leading provider of transport services in the UK and North America. Our services are a vital part of society - transporting customers for business, education, health, social or recreational purposes. We create solutions that reduce complexity, making travel smoother and life easier.

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# Executive summary and outlook

## Our 2019/20 environmental performance

The overwhelming majority of our carbon emissions (97.4%) derive from the fuels and electricity used to power our road and rail vehicles. Whilst we continue to improve the energy efficiency of our buildings, the magnitude of our transport-related emissions focuses our efforts towards fleet and fuel initiatives, where they can have the greatest impact on carbon reduction and improvements to air emissions.

Progressive decarbonisation of the UK electricity grid, electrification within our rail business, investment in newer, more efficient vehicles within our fleets, and greater renewable content in the fuels we use have all contributed to a 10.8% reduction in our gross carbon emissions compared to our 2015/16 baseline year (see page 4 for more details).

As we continue to strive to improve local air quality in our communities through lower emissions of air pollutants (such as nitrous oxides (NOx) and particulate matter (PM)). In 2019/20 we led work to develop a sector-wide rail air quality strategy, and have continued to invest in fuels and retrofit technologies supporting reduced NOx and PMs across our all our divisions. Read more about air quality on page 11.

In December 2019, we began operating our newest rail franchise, Avanti West Coast (Avanti), adding 59,667 tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e) to our carbon footprint this year. The inclusion of Avanti has started to reshape the carbon emission profile of First Rail by increasing the number of our vehicles able to operate using electric traction.

Even with the addition of Avanti, in the past year we have reduced our carbon footprint by 8.4% and in parallel, have reduced our carbon intensity (carbon emissions per £1m revenue), by 15.8% compared with the previous year.

## Outlook: a continued focus on climate change and air quality

Interest and focus on the global challenge of climate change continues to grow. During the year, the UK Government set a legally binding national target for net-zero greenhouse gas emissions by 2050. Coalitions of American states, cities and businesses in support of the Paris Agreement on climate change now represent almost 70% of US GDP.

We recognise that investors and broader stakeholders are seeking consistent climate-related financial disclosures. Of particular relevance, the UK Government is exploring how to implement mandatory climate-related financial disclosures by 2022, based on recommendations from the Task Force on Climate-related Financial Disclosures (TCFD).

As part of our Group-wide sustainability framework, Mobility Beyond Today (described on page 2), we have committed to implementing the TCFD's recommendations. We will be transparent with our progress in helping to combat climate change and improve local air quality, and will publicly disclose decision-useful climate-related financial information in alignment with TCFD recommendations.

In this Environmental Data Report 2020 we set out our progress in reducing our carbon emissions, energy consumption, air emissions and broader environmental impacts. In our reporting in 2021 we will also set out our progress against the four TCFD themes (governance, strategy, risk management, and metrics and targets).

# Introduction

**At FirstGroup, we have a critical role to play in creating a connected, healthy, zero-carbon world: contributing to local prosperity and growth, reducing congestion on the roads, improving air quality and helping to lower carbon emissions. Our ambition is to ensure we are the partner of choice for innovative and sustainable transport, accelerating the transition to a zero-carbon future.**

Mobility Beyond Today is our Group-wide strategic framework for delivering and integrating sustainability into our business. Recognising that climate change is the greatest long-term challenge of our times, within this strategic framework we have committed to accelerate the change in the transport sector through leadership in three priority areas: innovation for our customers, being the partner of choice for low- and zero-emission transport, and supporting our people.

Each of FirstGroup's approximately 100,000 employees has a role to play in making our commitments a reality. More information on our Mobility Beyond Today strategy can be found at [www.firstgroupplc.com/responsibility](http://www.firstgroupplc.com/responsibility).

## Environmental Data Report 2020

The information in this report supports and expands upon environmental information in our Annual Report and Accounts 2020 (ARA 2020). Our obligations under the Streamlined Energy and Carbon Reporting (SECR) regulations are also met within our ARA 2020.

In addition to environmental information, our ARA 2020 also covers our other non-financial impacts, including social and governance issues, such as safety, employee engagement, diversity, health and wellbeing,

community engagement, ethics and human rights. Our ARA 2020 can be found on our website at [www.firstgroupplc.com/investors](http://www.firstgroupplc.com/investors).

In this Environmental Data Report 2020 we highlight our performance in reducing carbon emissions and environmental impact – including air quality, energy use, waste production, water consumption and use of natural resources. We also provide an overview of environmental compliance, with detailed information on assurance of environmental data, its scope and exclusions, and our approach to re-baselining.

## Data verification and independent assurance

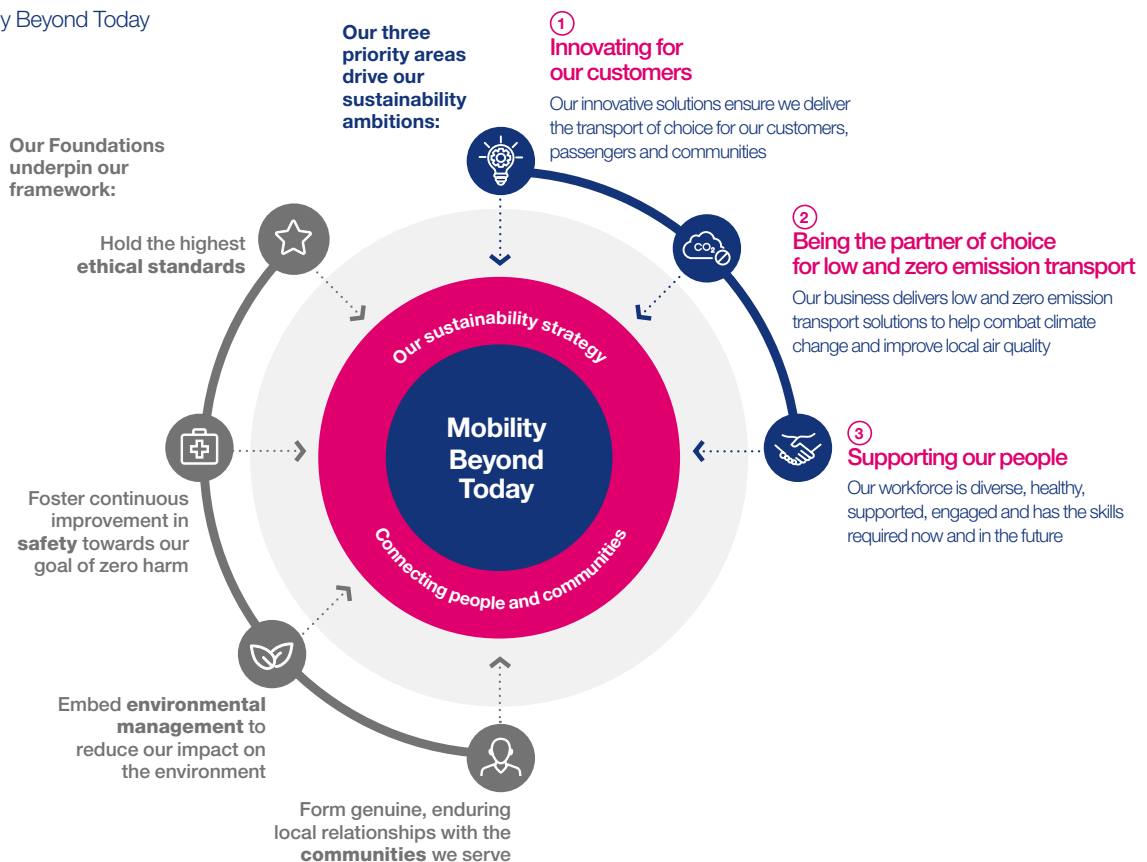
We engaged Carbon Intelligence as an independent specialist to provide verification of our 2019/20 carbon footprint and energy data as detailed in this report. An assurance statement from Carbon Intelligence can be found on page 15.

## Reporting approach and methodologies

This report has been prepared in accordance with the World Resources Institute's 'GHG Protocol: Corporate Accounting and Reporting Standard', applying the operational control approach to our organisational boundary with a materiality threshold of 5% of total carbon emissions and energy consumption (agreed with our independent assurance provider).

A full breakdown of our reporting approach, including our methodology, boundary, scope and exclusions can be found in Appendix A from page 16. Where possible, we have avoided the use of acronyms and abbreviations or provided the interpretation of these within this report. A glossary and frequently used terms section can be found on page 19.

Figure 1: Mobility Beyond Today



# Carbon emissions

## Overview of our carbon emissions

We have reduced our gross carbon emissions by 10.8% since our baseline 2015/16 year. As a leading provider of transport services in the UK and North America, the vast majority (97.4%) of our carbon emissions derive from the fuel (scope 1) and electricity (scope 2) we use to power our road and rail vehicles.

In 2019/20 we produced a total of 2,420,471 absolute tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e), a reduction of 8.4% from the previous year (2019: 2,643,524).

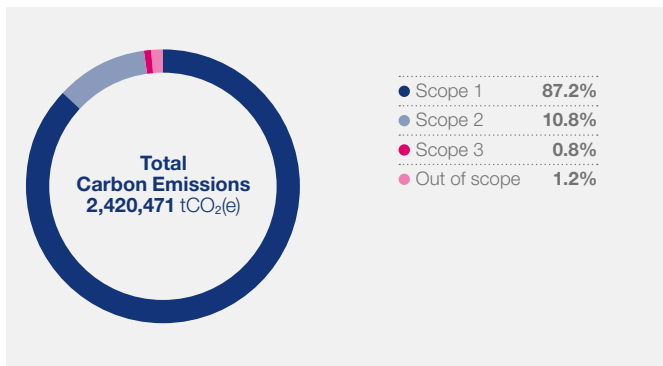
Our scope 1 emissions represent 87.2% of our total carbon footprint as shown in Graph 1 below (2019: 88.7%). The slight year-on-year reduction in the proportion of scope 1 emissions is attributed primarily to the combined result of better data quality and analysis and improved carbon emission factors, supported by the increased use of electric and low- and zero-emission vehicles.

Our scope 2 emissions relate to the electricity we purchase to power our electric train fleets and buildings. The slight increase in these emissions to 10.8% of all emissions (2019: 10.1%) is primarily due to the award of our newest rail franchise, Avanti, which brings with it a predominately electric-powered train fleet. Data from Avanti is included in this report for the period from 8 December 2019 onwards.

We now capture and report on an extended range of scope 3 emissions. However due to the nature of our business, our scope 3 emissions remain relatively small, a slight increase to 0.8% of our total footprint this reporting year (2019: 0.7%).

Our 'out of scope' emissions represent indirect emissions from biofuel burning which has increased from our previous reporting year (2019: 0.6%) to 1.2% this reporting year. The footprint of this scope will continue to increase as the proportion of bio-fuel we use increases. Comparisons against our previous years' emission data can be found in Tables 1 (on page 4) and Table 3 (on page 5).

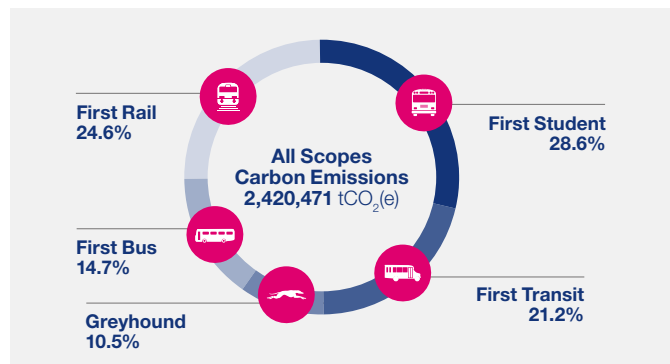
**Graph 1: 2019/20 carbon emissions (tCO<sub>2</sub>e) by scope (location-based)**



The majority of our carbon emissions (60.4%) arise from our North American divisions (described as 'Non-UK' in this report to align with the naming convention used in the new SECR regulations). Of our total carbon footprint, First Student still holds the largest footprint (28.6%), First Transit is 21.2%, and Greyhound is 10.5%, as shown in Graph 2 below.

The balance of our carbon emissions (39.6%) arise from our UK divisions – First Bus (14.7%) and First Rail (24.6%). Our head office activities form just 0.3% of our gross emissions and are therefore excluded from our reporting as de-minimus (less than 5% of our overall emissions – in line with our reporting approach, which can be found on page 16).

**Graph 2: 2019/20 All Scopes carbon emissions by FirstGroup business division**



Whilst First Student currently holds the largest carbon footprint of all of our divisions, we expect First Rail to overtake this next year, once our newest rail franchise, Avanti, has been in place for a full 12 months.

In line with our re-baselining and re-statement policies, which can be found on page 18, we will complete a review and analysis of a full year of data for Avanti and report on our baseline position in our 2020/21 report.

For further details on the methodologies we use to calculate our carbon emissions, please see Appendix A from page 16.

# Carbon emissions

continued

## Location-based emissions

In compliance with the SECR regulations, we have provided a geographical breakdown of our carbon emissions in Table 1 (below), and in our ARA 2020, with 'UK' referring to locations or operations in England, Scotland, Wales and Northern Ireland, and 'Non-UK' referring to locations or operations in Ireland and North America (the United States and Canada).

**Table 1:** 2016-20 FirstGroup location-based carbon emission equivalent (tCO<sub>2</sub>e) against previous and baseline year

tCO <sub>2</sub> e	Reporting years				Baseline year	
	2020		2019		2016	
Scope and Region	Non-UK	UK	Non-UK	UK	Non-UK	UK
Scope 1	<b>1,414,417</b>	<b>696,782</b>	1,542,650	802,118	1,568,008	848,773
Scope 2	<b>40,907</b>	<b>221,199</b>	48,647	217,277	127,634	139,607
Scope 1 + 2	<b>1,455,324</b>	<b>917,946</b>	1,591,269	1,019,396	1,695,642	988,380
<b>Scope 1 + 2 – Total</b>	<b>2,373,270</b>		<b>2,610,692</b>		<b>2,684,022</b>	
Scope 3	<b>19,670</b>		18,179		15,126	
Out of scope	<b>27,532</b>		14,654		13,585	
All scopes	<b>1,461,692</b>	<b>958,779</b>	1,598,642	1,044,855	1,695,642	988,380
<b>All scopes – Total</b>	<b>2,420,471</b>		<b>2,643,497</b>		<b>2,712,733</b>	
All scopes – % change from baseline	<b>-10.8%</b>		-2.6%		–	
All scopes – % change from previous year	<b>-8.4%</b>		–		–	

\* Emissions from Avanti are included in our 2020 data, but only from the franchise start date of 8 December 2019. We have not rebaselined previous years' calculations.

The UK national electricity grid continues to make strides in decarbonisation of electricity power generation and supply and also increasing the renewable content of fuel. This reporting year we have seen lower carbon emissions in part due to the improved UK standard carbon emission factors compared to last year. For example, this has included 10% lower carbon emission factors for UK electricity grid, 7% lower carbon emission factors for gas oil fuels and 2% lower carbon emission factors for diesel fuels. Further improvements in data quality from our supply chain has enabled us to obtain and apply bespoke emission factors for gas oil for Avanti and Great Western Railway (GWR), which are 12% lower than last year's UK emission factors.

In North America, carbon emission factors related to our vehicle fuels have remained the same. However there has been an increase in carbon emission factors related to the electricity we consume in our buildings.

For further detail on the sources we use to calculate our carbon emissions, please see the emission and energy conversion factors sub-section of our reporting approach in Appendix A (on pages 16 and 17).

## Carbon emissions

continued

A change in our data this year results from the inclusion of Avanti to our business from 8 December 2019. The inclusion of just over three months of data from Avanti has added 59,667 tonnes of CO<sub>2</sub>e to our carbon footprint for 2019/20 (approximately 2.2%). In Table 2 below we have shown our carbon emissions without Avanti, and in Table 3 we present our carbon footprint with and without Avanti to demonstrate the underlying effect on our carbon emissions.

**Table 2:** 2016-20 location-based carbon emissions without the inclusion of Avanti

tCO <sub>2</sub> e		Reporting years			Baseline year
Scope	2020	2019	2018	2017	2016
Scope 1- without Avanti	<b>2,089,644</b>	2,344,768	2,431,367	2,436,362	2,416,781
Scope 2 – without Avanti	<b>225,617</b>	265,924	276,973	270,988	267,241
Scope 3 – without Avanti	<b>19,110</b>	18,179	10,520	10,668	15,126
Out of scope – without Avanti	<b>26,433</b>	14,654	10,065	9,530	13,585
<b>Total (scope 1+2) – without Avanti</b>	<b>2,315,261</b>	<b>2,610,692</b>	<b>2,708,340</b>	<b>2,707,350</b>	<b>2,684,022</b>
<b>Total (All scopes) – without Avanti</b>	<b>2,360,804</b>	<b>2,643,524</b>	<b>2,727,744</b>	<b>2,727,548</b>	<b>2,712,733</b>
% change (against 2016 baseline) – without Avanti	<b>-13.0%</b>	-2.6%	0.6%	0.5%	–

In Table 3 below we present our carbon footprint with and without Avanti to allow comparison with previous years of emissions. This new franchise has started to re-shape the profile of our rail business towards electric traction and has therefore resulted in a lower carbon intensity for our First Rail fleet overall. In 2018/19, 32.7% of gross First Rail emissions derived from scope 2 sources, whereas, this has increased to 36.2% in 2020.

**Table 3:** 2016-20 location-based carbon emissions and impact of Avanti

tCO <sub>2</sub> e		Reporting years			Baseline year
Scope	2020*	2019	2018	2017	2016
Scope 1- without Avanti	<b>2,089,644</b>	2,344,768	2,431,367	2,436,362	2,416,781
Scope 1	<b>2,111,199</b>	–	–	–	–
Scope 2 – without Avanti	<b>225,617</b>	265,924	276,973	270,988	267,241
Scope 2	<b>262,070</b>	–	–	–	–
Scope 3 – without Avanti	<b>19,110</b>	18,179	10,520	10,668	15,126
Scope 3	<b>19,670</b>	–	–	–	–
Out of scope – without Avanti	<b>26,433</b>	14,654	10,065	9,530	13,585
Out of scope	<b>14,654</b>	–	–	–	13,585
<b>Total (scope 1+2) – without Avanti</b>	<b>2,315,261</b>	<b>2,610,692</b>	<b>2,708,340</b>	<b>2,707,350</b>	<b>2,684,022</b>
<b>Total (scope 1+2)</b>	<b>2,373,270</b>	<b>2,798,850</b>	<b>2,896,499</b>	<b>2,895,509</b>	<b>2,902,073</b>
<b>Total (All scopes) – without Avanti</b>	<b>2,360,804</b>	<b>2,643,524</b>	<b>2,727,744</b>	<b>2,727,548</b>	<b>2,712,733</b>
<b>Total (All scopes)</b>	<b>2,420,471</b>	<b>2,832,864</b>	<b>2,917,084</b>	<b>2,916,885</b>	<b>2,902,073</b>
% change (against 2016 baseline) – without Avanti	<b>-13.0%</b>	-2.6%	0.6%	0.5%	–
% change (against 2016 baseline)	<b>-10.8%</b>	–	–	–	–

\* Unless otherwise stated, carbon emissions from Avanti are included in our 2020 data, but only from the franchise start date of 8 December 2019. We have not rebaselined previous years calculations.

For further detail on the methodologies we use to calculate our carbon emissions, please see Appendix A from page 16 onwards.



# Carbon emissions

continued

## Market-based emissions

In this section we report our scope 2 emissions using the market-based reporting method, reflecting the emissions of the electricity we actually purchase, which can be different from the emissions of the electricity mix that is generated locally. Our total market-based carbon emissions (scope 1 + scope 2a) in 2019/20 were 14.4% lower than our 2015/16 baseline year, whereas our location-based emissions for scope 1 and 2 for the same period are 11.6% lower than the baseline year. The methodology and source data for this table is explained in Appendix A (on pages 16 and 17).

**Table 4: 2016-20 market-based carbon emissions (scopes 1 and 2a)**

tCO <sub>2</sub> e Scope	2020*	Reporting years			Baseline year
		2019	2018	2017	2016
Scope 2a (market-based)	<b>42,714</b>	48,768	46,683	46,128	72,134
<b>Scope 1 + 2a (market-based)</b>	<b>2,131,783</b>	<b>2,393,535</b>	<b>2,478,050</b>	<b>2,482,490</b>	<b>2,488,915</b>
% change (against 2016 baseline)	<b>-14.3%</b>	-3.8%	-0.4%	-0.3%	-
<b>Scope 1 + 2 (location-based)</b>	<b>2,373,270</b>	<b>2,610,692</b>	<b>2,708,340</b>	<b>2,707,350</b>	<b>2,684,022</b>
% change (against 2016 baseline)	<b>-11.6%</b>	-2.7%	0.9%	0.9%	-

\* Carbon emissions from Avanti are included in our 2020 data, but only from the franchise start date of 8 December 2019. We have not rebaselined previous years calculations.

## Carbon intensity

**We have reduced the carbon intensity (tCO<sub>2</sub>e per £1m revenue) of our business by 15.8% since 2016.**

We use carbon intensity as a measure of efficiency. We use the following three methods to measure and analyse this efficiency:

- carbon emissions per £1m revenue (shown in Table 5 below). This metric shows the degree to which carbon is being uncoupled from business growth, as well as allowing investors to make like-for-like comparisons across companies and industries.
- carbon emissions per vehicle kilometre (shown in Table 6 on page 7). This metric measures the efficiency of our vehicles and enables us to track fleet improvements over time and allows industry benchmarking.
- carbon emissions per passenger kilometre (shown in Tables 7 and 8 on page 8). This metric enables comparison against alternative and private modes of transport and provides information on the carbon efficiency of individual journeys from a passenger and customer perspective.

This reporting year (2019/20) our carbon emissions have dropped by 8.4% and revenues have increased by 8.8% from our previous reporting year (2018/19). Against our baseline year (2015/16), revenues reported this year have increased by 48.6% and carbon emissions have dropped 10.8%. The combined factors of increased revenues and reduced carbon emissions have resulted in a carbon intensity of 312 (tCO<sub>2</sub>e/per £1m revenue) this year (15.8% lower against last year).

**Table 5: 2016-20 FirstGroup carbon intensity by revenue (tCO<sub>2</sub>e/per £1m revenue)**

tCO <sub>2</sub> e/£m revenue Scope	2020*		Reporting years		Baseline year	
	Non-UK	UK	2019		2016**	
			Non-UK	UK	Non-UK	UK
All Scopes (tCO <sub>2</sub> e) by location	<b>1,461,692</b>	<b>958,779</b>	1,598,642	1,044,855	1,695,642	988,380
Total All Scopes (tCO <sub>2</sub> e)	<b>2,420,471</b>		<b>2,643,524</b>		<b>2,712,733</b>	
Revenue by location	<b>3,715</b>	<b>4,040</b>	3,567	3,560	3,023	2,195
Total Revenue	<b>7,755</b>		<b>7,127</b>		<b>5,218</b>	
Intensity by location	<b>393</b>	<b>237</b>	448	293	561	450
% change from previous year	<b>-12.2%</b>	<b>-19.1%</b>	-	-	-	-
% change from baseline	<b>-29.8%</b>	<b>-47.3%</b>	-20.1%	-34.8%	-	-
<b>Total carbon intensity</b>	<b>312</b>		<b>371</b>		<b>520</b>	
% change from previous year	<b>-15.8%</b>		-		-	
% change from baseline	<b>-40.0%</b>		-28.7%		-	

\* Emissions from Avanti are included in our 2020 data, but only from the franchise start date of 8 December 2019. We have not rebaselined previous years calculations.

\*\* Baseline year total carbon intensity has been adjusted from our previously reported intensity figure following a change in calculations.

## Carbon emissions

continued

### Carbon emissions per vehicle kilometre

Our gross carbon emissions per vehicle km have reduced by 10.5% since last year. Reductions in carbon intensity have been due to a combination improved emission factors for fuel and electricity, supported by the use of technology to assist our drivers in improving driving efficiency across our routes and the introduction of newer and lower carbon fleet across our road and rail divisions. In Table 6 below we show carbon intensities of our road and rail divisions in our current reporting year against previous reporting years.

Our road transport divisions have continued to innovate and further transition to lower-carbon fleets. Working in partnership with our customers, local authorities and suppliers we have continued to operate electric, hydrogen and biogas buses in the UK, increased our natural gas-powered fleet in First Student and First Transit, and continued to invest in low and zero-emission vehicles around the Group. These efforts have been the primary factor in a drop of 7.6% in the carbon intensity of our road divisions.

A reduction in the carbon emission factors for electricity and an improvement in data quality of biodiesel fuel reporting have been the largest factors in the reduced carbon intensity of the rail transport division (-22.5% year-on-year). Our Train Operating Companies (TOCs) have continued with ongoing programmes to replace older, diesel rolling stock with new bi-mode locomotives. The Avanti franchise, with a large fleet of electric vehicles, has also helped to improve the carbon intensity of the rail division.

**Table 6:** 2016-20 FirstGroup divisional carbon intensity by vehicle kilometre (gCO<sub>2</sub>e/vkm)

gCO <sub>2</sub> e/vkm	Reporting Years				Baseline Year
	2020	2019	2018	2017	2016
Division					
First Student	767	807	808	810	795
First Transit	939	1,160	821	1,043	954
Greyhound	961	964	950	955	966
First Bus	975	1,010	1,020	1,049	1,099
<b>Total Road transport</b>	<b>3,641</b>	<b>3,940</b>	<b>3,599</b>	<b>3,857</b>	<b>3,814</b>
Road transport – % change against previous year	-7.6%	9.5%	-6.7%	1.1%	–
Road transport – % change against baseline year	-4.5%	3.3%	-5.6%	1.1%	–
First Rail	748*	965	955	–	–
<b>Total Rail transport</b>	<b>748*</b>	<b>965</b>	<b>955</b>	–	–
Rail transport – % change against previous year	-22.5%*	1.0%	–	–	–
<b>Total FirstGroup</b>	<b>4,389*</b>	<b>4,905</b>	<b>4,554</b>	–	–
FirstGroup – % change against previous year	-10.5%*	7.7%	18.8%	–	–

\* Carbon emissions and vehicle kilometres from Avanti are included in our 2020 data, but only from the franchise start date of 8 December 2019. We have not rebaselined previous years calculations.

### Carbon emissions per passenger kilometre

In Greyhound, although our year-on-year absolute carbon emissions of the fuels used in our vehicles fell by 6.8%, our carbon per passenger km has increased by 3.3% this year to 33.6 gCO<sub>2</sub>e/pkm, shown in Table 7 (below). This is primarily due to passenger km falling by more than the carbon emissions from the fuels we use in our Greyhound vehicles (which fell by 6.8%). The methodology and source data for this table are explained in Appendix A on pages 16 and 17.

We do not report a carbon intensity per passenger km for First Student or First Transit due to the contract-backed nature of these businesses and that reporting of passenger kilometres is not routinely required in our contracts.

**Table 7:** North America carbon intensity by passenger kilometre (gCO<sub>2</sub>e/pkm)

gCO <sub>2</sub> e/pkm	2020	2019	2018	2017	2016
First Student	We do not report a carbon intensity per passenger km for First Student or First Transit due to the contract-backed nature of these businesses				
First Transit					
Greyhound	33.6	32.5	32.2	32.4	33.7
Car (US average)*	172.4	172.4	172.4	174.8	174.8
Domestic flight (US average one-way))	258.4	261.4	256.9	261.8	267.6

\* We have applied 2018 car passenger intensity data for 2019 and 2020, as a full dataset was not available at the time of this report being issued.

# Carbon emissions

continued

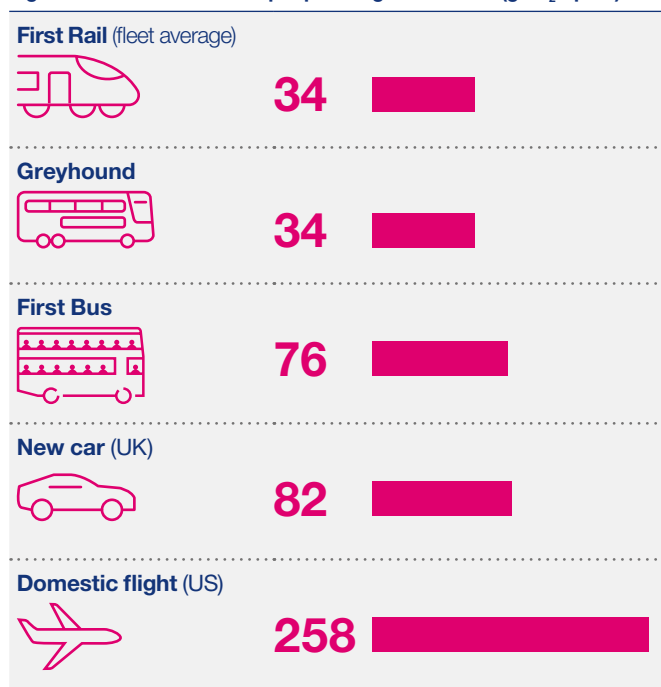
In the UK, our divisions have continued to reduce their carbon intensity by passenger km (shown in Table 8 below). In our First Rail division, emissions associated with each train kilometre have fallen by 21.7%, and our First Rail carbon intensity per passenger km is now 33.7gCO<sub>2</sub>e/pkm. Our bus services also continue to out-perform alternative and private modes of transport on a per passenger km basis, including UK new cars and US domestic flights, as illustrated in Figure 2 below. The methodology and source data for this table is explained in Appendix A (on pages 16 and 17).

**Table 8: UK carbon intensity by passenger kilometre (gCO<sub>2</sub>e/pkm)**

gCO <sub>2</sub> e/pkm	2020	2019	2018	2017	2016
First Bus	<b>76.0</b>	84.4	81.8	88.3	85.4
First Rail	<b>33.7*</b>	43.1	44.8	51.3	50.4
Car (UK newly registered average)	<b>81.8</b>	81.8	80.0	78.0	77.7
Domestic flight (UK average round-trip)	<b>102.0</b>	–	–	–	–

\* Carbon and passenger data from Avanti are included in our 2020 First Rail data, but only from the franchise start date of 8 December 2019. We have not rebaselined previous years calculations.

**Figure 2: Carbon emissions per passenger kilometre (gCO<sub>2</sub>e/pkm)**



Our services already offer solutions that are lower in carbon intensity than alternative and private modes of travel for our customers, as shown in Figure 2. At 33.6gCO<sub>2</sub>e per passenger km, intercity travel by Greyhound already offers the lowest per-passenger carbon emissions of modal alternatives – around 87% lower emissions than an equivalent domestic passenger plane journey and 81% lower than the average US passenger car.

We are going further in decreasing the carbon intensity of our mobility solutions by investing in, trialling and testing new technologies, and switching to more efficient low- and zero-emission vehicles to step up to the challenge of decarbonisation and play our part in accelerating the transition to a zero-carbon world.

The methodology and source data for this table is explained in Appendix A (on pages 16 and 17).

# Energy consumption

## Overview of our energy use

**In the past year, we have continued to optimise our energy use, leading to a drop in energy intensity (by revenue) of 28.7% against our baseline (2015/16), as shown in Table 9 below.**

Within this section we have detailed our Group-wide energy consumption arising from activities that we are directly responsible for, including our use of electricity, primary fuels, heat and steam. We are directly responsible for 9,607,984 MWh (9,607,984,203 kWh) of energy.

Since our 2015/16 baseline year, our absolute energy footprint has increased by 5.9%, primarily driven by the addition of Avanti and South Western Railway (SWR) to our rail portfolio. We have also increased our reported renewable fuel use in the UK, as we are now able to quantify the proportion of the fuel used by our Rail division that contains biodiesel (a renewable fuel). We have been able to extract this proportion of fuel from our data and report on this as renewable fuel (8.5%) whilst treating and reporting the remainder of the fuel (91.5%) as non-renewable. Some of our sites produce self-generated renewable energy (photovoltaic), and we are working with our suppliers to improve the data quality of reporting for this energy source and aim to report on this in our next report.

In line with our re-statement policy that can be found in Appendix A on page 18, we will gather data and review our previous reporting years' fuel data and establish if we can separate the non-renewable and renewable proportion of fuel and whether a re-statement of previous data is required.

In compliance with the SECR regulations we have provided a geographical breakdown of our energy consumption in kWh in our ARA 2020 and additionally in MWh for additional reporting years in Table 9 (below) to allow comparison of carbon intensity.

**Table 9:** 2016-20 FirstGroup renewable and non-renewable energy consumption (MWh HHV) by location against baseline year

MWh HHV	Reporting Years								Baseline Year	
	2020*		2019		2018		2017		2016	
Energy type/region	Non-UK	UK	Non-UK	UK	Non-UK	UK	Non-UK	UK	Non-UK	UK
<b>Non-renewable</b>										
Fuels	<b>5,104,684</b>	<b>2,709,995</b>	5,627,121	3,076,737	5,884,078	3,155,892	5,597,199	3,187,957	5,566,095	3,203,454
Electricity	<b>93,453</b>	<b>6,002</b>	107,263	–	79,718	–	97,302	–	115,378	–
<b>Renewable</b>										
Fuels	<b>282,843</b>	<b>551,716</b>	327,213	–	379,791	–	99,391	–	103,655	–
Electricity	–	<b>858,651</b>	–	767,147	–	655,007	–	82,231	–	82,255
Steam	<b>642</b>	–	769	–	–	–	–	–	–	–
Self-generated	–	–	–	–	–	–	–	–	–	–
Non-renewable energy consumption	<b>5,198,136</b>	<b>2,715,997</b>	5,734,384	3,076,737	5,963,795	3,155,892	5,694,501	3,187,957	5,681,473	3,203,454
Renewable energy consumption	<b>283,484</b>	<b>1,410,366</b>	327,982	767,147	379,791	655,007	99,391	82,231	103,655	82,255
<b>Total – non-renewable energy consumption</b>	<b>7,914,133</b>		<b>8,811,121</b>		<b>9,119,687</b>		<b>8,882,458</b>		<b>8,884,927</b>	
<b>Total – renewable energy consumption</b>	<b>1,693,851</b>		<b>1,095,128</b>		<b>1,034,797</b>		<b>181,622</b>		<b>185,909</b>	
Energy consumption	<b>4,126,364</b>	<b>5,481,621</b>	3,843,884	6,062,366	3,810,899	6,343,586	3,270,188	5,793,892	3,285,709	5,785,127
% change against baseline year	<b>-5.2%</b>	<b>25.6%</b>	4.8%	17.0%	9.7%	16.0%	0.2%	-0.5%	–	–
<b>Total energy consumption</b>	<b>9,607,984</b>		<b>9,906,429</b>		<b>10,154,485</b>		<b>9,064,080</b>		<b>9,070,836</b>	
% change against baseline year	<b>5.9%</b>		9.2%		11.9%		-0.1%		–	–
% change against previous year	<b>-3.0%</b>		-2.4%		12.0%		-0.1%		–	–
<b>Total revenue</b>	<b>7,749</b>		<b>7,127</b>		<b>6,820</b>		<b>5,653</b>		<b>5,218</b>	
Energy intensity by revenue	<b>1,240</b>		1,390		1,489		1,603		1,738	
% change against baseline year	<b>-28.7%</b>		-20.0%		-14.3%		-7.8%		–	–
% change against previous year	<b>-10.8%</b>		-6.6%		-7.1%		-7.8%		–	–

\* Energy consumption from Avanti is included in our 2020 data, but only from the franchise start date of 8 December 2019. We have not rebaselined previous years calculations.

# Vehicles

**Through investment in our fleets we are continuing to shift to lower emission and higher occupancy vehicles, reducing our impact on air quality, decreasing our use of fossil fuels and offering practical and convenient services to our customers.**

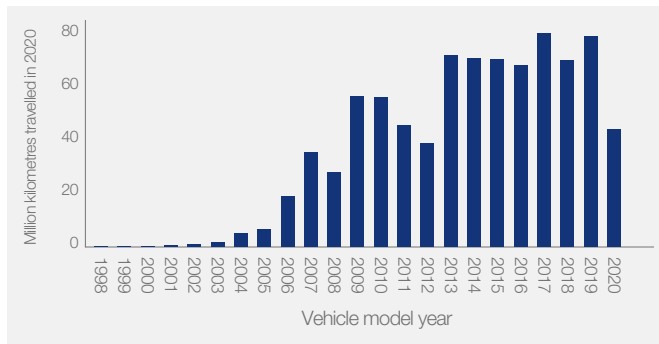
This section outlines the kilometres driven by our divisions by year and, where possible, broken down by class of vehicle. We do operate a small fleet of company vehicles and due to our multi-site national and global operations, our staff perform duties captured under business mileage. We are working towards providing data on our company mileage in our next reporting year.

The methodology and source data for these graphs is explained in Appendix A (on pages 16 and 17).

## First Student

In 2019/20, First Student reduced its diesel mileage by 7%, and increased its proportion of mileage in CNG and gasoline by 18% and 9% respectively. 65.3% of First Student's vehicle km were by vehicles of 2013 model year or newer (see Graph 3 below).

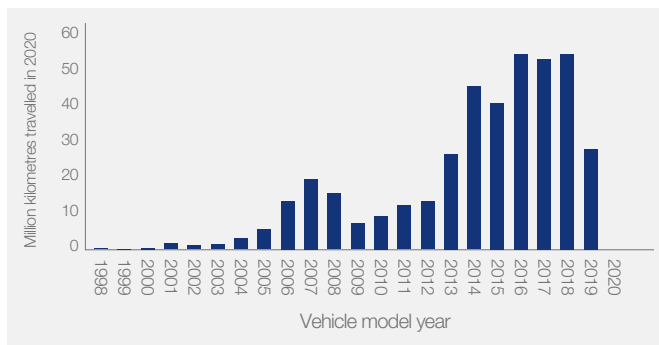
**Graph 3:** 2019-20 distance travelled by First Student vehicle by model year



## First Transit

In 2019/20, 74.4% of First Transit's vehicle km was achieved with vehicles of 2013 model year or newer. See Graph 4 (below).

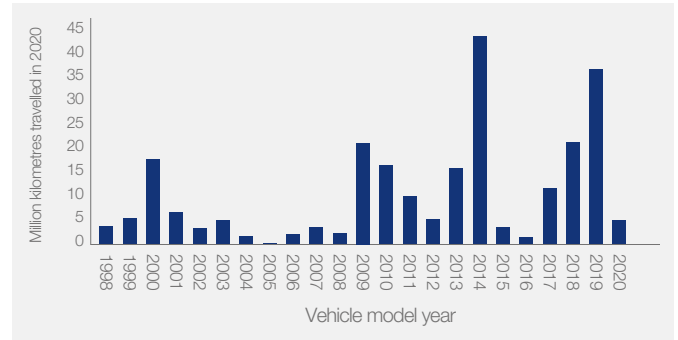
**Graph 4:** 2019-20 Distance travelled by First Transit Vehicle by model year



## Greyhound

In 2019/20, 57.1% of Greyhound's vehicle km was achieved with vehicles of 2013 model year or newer. See Graph 5.

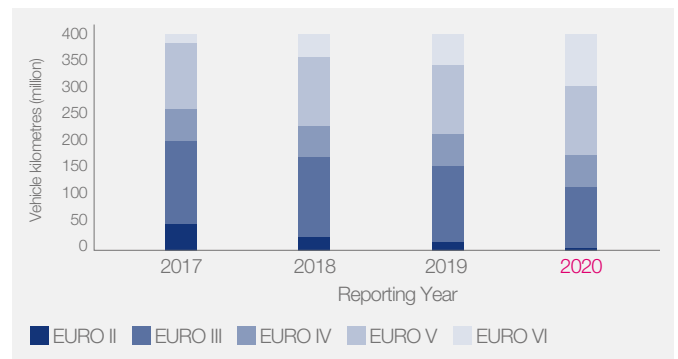
**Graph 5:** 2019-20 distance travelled by Greyhound vehicle by model year



## First Bus

In 2019/20 we introduced 193 new Euro VI or better buses, including 74 biogas buses for Bristol (with a further three scheduled for delivery shortly). 23.8% of First Bus's vehicle km were by vehicles of Euro VI standard or equivalent. See Graph 6 (below).

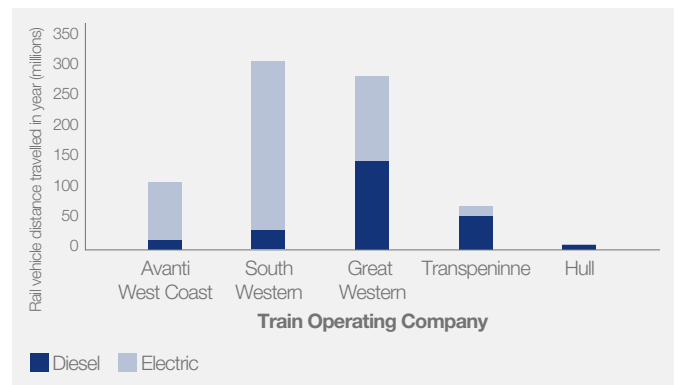
**Graph 6:** 2019-20 Distance travelled by First Bus vehicle by Euro engine type



## First Rail

67.6% of distance travelled by our TOCs was by electric traction in 2019/20. Without Avanti, distance travelled by electric traction would have been 55.6%. See Graph 7 (below).

**Graph 7:** 2019-20 First Rail distance travelled under electric or diesel traction



# Air quality

**Air quality has a significant impact on the health of our communities, and many cities and towns are already working to place restrictions on the most polluting vehicles and prioritise public transport. An important aspect of improving local air quality is to make the shift away from car journeys, and to invest in convenient and cost-effective low emission public transport networks. Communities around the globe have noted the value of improved air quality during the coronavirus lockdown, and there is a groundswell of support for making this a long-term reality.**

In the UK, towns and cities are implementing plans to control vehicle emissions to improve air quality. In the US, individual states and the Environmental Protection Agency (EPA) have driven a programme of stricter vehicle and emission standards since the 1960s to reduce emissions of nitrogen oxides (NOx), particulate matter (PM) and other pollutants.

Through the process of contract renewal, new contracts and planned fleet replacement, we are replacing our older, higher emission fleet with newer 'model year' variants. This includes vehicles running on fuels such as compressed natural gas (CNG), liquefied petroleum gas (LPG) and electricity.

Our replacement of older vehicles with newer, lower emission vehicles is having an effect in significantly reducing our emissions to air of NOx and PM2.5.

The methodology and source data for the following graphs is explained in Appendix A (on pages 16 and 17).

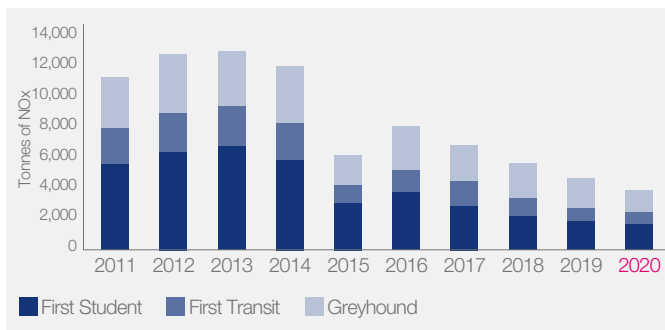
## North America

In 2019/20, our North American road divisions achieved a 15% reduction in NOx and a 23% reduction in tonnes of PM2.5 against 2018/19 tonnes of NOx emissions. See Graph 8 (below).

Using the EPA's 'Smartway Truck Tool' it is possible to calculate and track the overall impact our vehicle replacement programme has on overall emissions as older vehicles are retired and replaced by newer, lower emission vehicles. EPA's tool allows us to track the impacts of our fleet strategy and to quantify the impact that our use of 'alternative' fuels such as electricity, CNG and gasoline has on air emissions.

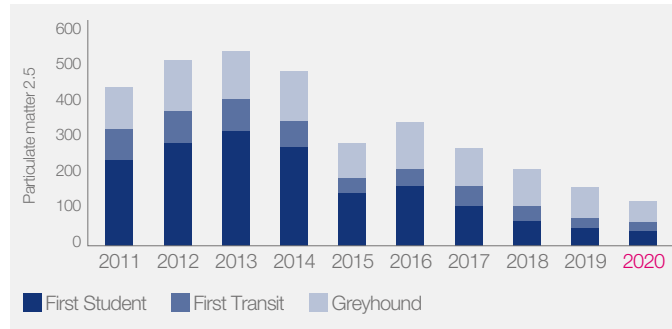
Over the last decade, our North American fleets have achieved a 65% decrease in gross emissions of nitrogen oxides.

**Graph 8: 2010-2020 FirstGroup North American Gross Emissions of Nitrogen Oxides (tonnes)**



Selecting lower emission vehicles and fuels is important if we are to reduce our impact on local air emissions. Over the last decade, our North American fleets have achieved a 72% reduction in tonnes of PM2.5. See Graph 9 (below).

**Graph 9: 2010-2020 FirstGroup North American Gross Emissions of Particulate Matter PM2.5 (tonnes)**



## UK

In the UK, we are working with stakeholders to collect and analyse better quality data for our bus and rail fleets. Within our Rail division we have trialled selective exhaust treatment of SWR's fleet and have recorded a reduction in NOx by up to 80%.

We are aiming to report and provide more detail of our progress in improving our emissions to air in the UK in our next reporting year.

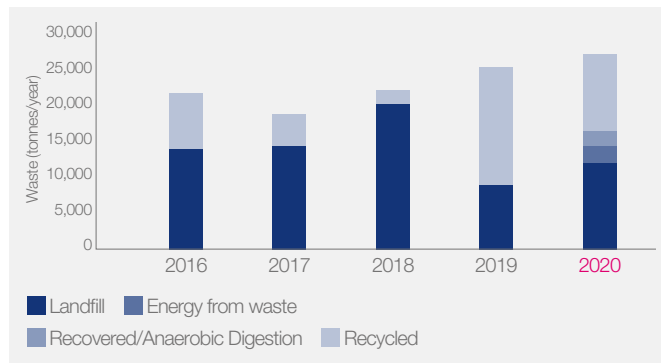
# Waste

**We are working to implement the circular economy principles and continue to apply the waste hierarchy in our decision making to ensure we procure what we need, and when waste is produced, we treat this waste as a valuable material until there is no other viable option to avoid disposing of it to landfill.**

FirstGroup applies a hierarchy for waste management. This considers waste elimination or reduction opportunities before re-use, recycling and finally, sending residual wastes to energy-from-waste plants or landfill as the last option. In 2019/20, total waste produced by FirstGroup was almost 26,000 tonnes. 44.6% of this waste was landfilled. See Graph 8 (below).

The methodology and source data for these graphs and table is explained in Appendix A (on pages 16 and 17).

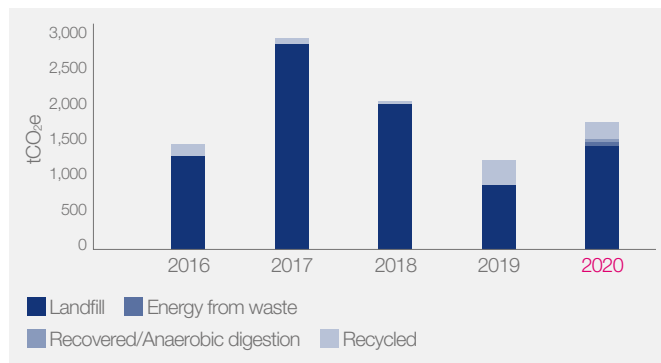
**Graph 10:** FirstGroup Tonnes of waste recycled/recovered or landfilled\*



\* Waste from Avanti is included in our 2020 data, but only from the franchise start date of 8 December 2019. We have not rebaselined previous years' calculations.

We have changed the way we classify our waste data this year to determine an accurate measure of its carbon impact and continue to work with our suppliers to improve our waste data. As shown in Graph 11 below, this year saw a 21.1% increase in waste-related emissions against our baseline year (2015/16). The change in classification has contributed to overall Scope 3 emissions increasing, but will help us focus our waste strategy towards options which minimise the impact to climate and other sustainability objectives. See Graph 11 (below).

**Graph 11:** 2016-20 FirstGroup carbon emissions related to our waste management activities\*



\* Waste from Avanti is included in our 2020 data, but only from the franchise start date of 8 December 2019. We have not rebaselined previous years' calculations.

Our waste carbon intensity has decreased by 0.23 in the UK and 0.21 in Non-UK locations, against the previous year. This is primarily due to better quality data and reclassifying our waste to allow reporting carbon intensity against the waste hierarchy. See Table 10 (below).

**Table 10:** 2019-20 FirstGroup waste carbon intensity\*

tCO <sub>2</sub> e/per £1m	Reporting years			
	2020*		2019	
Location	Non-UK	UK	Non-UK	UK
Waste (t)	12,653	13,206	17,685	12,085
<b>Total waste (t)</b>	<b>25,859</b>		<b>29,770</b>	
Carbon (tCO <sub>2</sub> e)	1,268	421	1,971	1,189
<b>Total carbon (tCO<sub>2</sub>e)</b>	<b>1,689</b>		<b>3,161</b>	
Revenue (per £1m)	3,715	4,040	3,567	3,560
<b>Total revenue (per £1m)</b>	<b>7,755</b>		<b>7,127</b>	
Carbon intensity	0.34	0.10	0.55	0.33
<b>Total carbon intensity</b>	<b>0.22</b>		<b>0.44</b>	

\* Revenue and waste from Avanti is included in our 2020 data, but only from the franchise start date of 8 December 2019. We have not rebaselined previous years calculations.

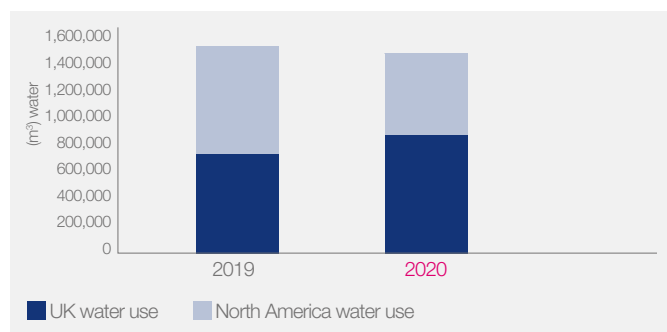
# Water

**We are committed to efficient resource use and this includes our water usage. We continue to improve the accuracy and scope of our water monitoring to better understand our water uses and control leakage.**

Last year we reported a total UK water figure for the first time. In 2019/20, our reported water use has increased by 13% in the UK and decreased by 24% in North America (Non-UK) from our previous reporting year (2018/19), however as this information is based on a number of estimates, we will work to improve the recording of water use in 2020/21. See Graph 12 (below).

The methodology and source data for the graph and table is explained in Appendix A (on pages 16 and 17).

**Graph 12: 2019-20 FirstGroup Water consumption\***



\* Water use from Avanti is included in our 2020 data, but only from the franchise start date of 8 December 2019. We have not rebaselined 2019 calculations.

Our water carbon intensity has reduced by 0.03 in North American locations and remained the same in the UK. See Table 11 (below).

**Table 11: 2019-20 FirstGroup water carbon intensity**

tCO <sub>2</sub> e /per £1m	Reporting years			
	2020*		2019	
Location	Non-UK	UK	Non-UK	UK
Water consumption (m <sup>3</sup> )	<b>591,842</b>	<b>816,084</b>	780,267	723,873
<b>Total water (m<sup>3</sup>)</b>	<b>1,407,926</b>		<b>1,504,139</b>	
Carbon (tCO <sub>2</sub> e)	<b>204</b>	<b>281</b>	268	249
<b>Total carbon (tCO<sub>2</sub>e)</b>	<b>484</b>		<b>517</b>	
Revenue (per £1m)	<b>3,715</b>	<b>4,040</b>	3,567	3,560
<b>Total revenue (per £1m)</b>	<b>7,755</b>		<b>7,127</b>	
Carbon intensity	<b>0.05</b>	<b>0.07</b>	0.08	0.07
<b>Total carbon intensity</b>	<b>0.12</b>		<b>0.15</b>	

\* Revenue and water from Avanti is included in our 2020 data, but only from the franchise start date of 8 December 2019. We have not rebaselined previous years calculations.



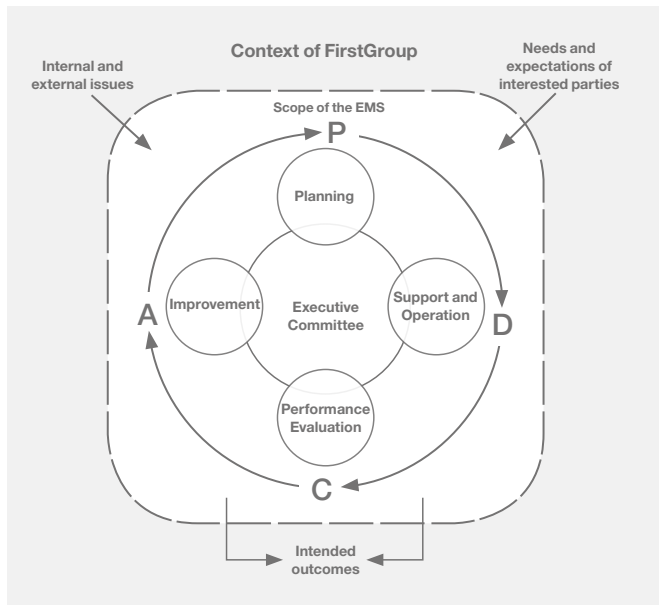
# Environmental compliance

## Management Systems

**We operate environmental management systems (EMS) across a large proportion of our UK divisions and formal, non-accredited risk-based EMS across North America divisions.**

EMS provide a systematic framework of processes that are designed to protect the environment and respond to the changing environmental conditions in balance with socio-economic need. An EMS enables us to specify requirements to achieve the intended environmental outcomes we set our business, taking into account needs of our customers, communities and investors.

**Figure 3: EMS Leadership, Plan, Do, Check, Act model**



The systematic approach to environmental management allows our leadership teams access to information to build success over the long-term and create options for contributing to sustainability goals by:

- protecting the environment through preventing or mitigating adverse environmental impacts
- mitigating the potential adverse effect of environmental conditions on the Company
- assisting us to fulfil our legal and corporate compliance obligations
- enhancing the Group's environmental performance
- controlling or influencing the way our services are designed, manufactured, distributed and disposed of by using a lifecycle perspective that can prevent environmental impacts from being unintentionally shifted elsewhere within the lifecycle
- achieving financial and operational benefits that can result from implementing environmentally sound alternatives that strengthen FirstGroup's market position
- communicating environmental information to relevant interested parties.

In the UK, we are either certified or conform to BS EN ISO 14001 across a large proportion of First Bus and First Rail franchise activities (excluding Hull Trains) and BS EN ISO 50001 within some TOCs. In North America our EMS identifies and reduces environmental risks with support from our environmental compliance partner, Strata Inc.

## Environmental Violations/fines

**We collect and record all environmental incidents and non-conformities, and any associated fines, enforcement penalties or clean-up settlements received.**

We report this information to our Executive Committee. Any single fine over \$10,000 would be considered 'significant'. This information is provided in Table 12 below:

**Table 12: FirstGroup environmental violations/fines 2019/20**

Number of non-conformance penalties issued:	4
Number of non-conformance penalties issued in excess of \$10,000.00:	0
Total value of non-conformance penalties issued:	\$10,309

## Introduction and Objectives

Carbon Credentials Energy Services Ltd (Carbon Intelligence) was commissioned by FirstGroup plc to provide verification of their 2019/20 Carbon and Energy Footprint as detailed within the 'Annual Report and Accounts 2020 and Environmental Data Report 2020', to a limited level of assurance and to the ISO 14064-3 standard.

The objectives of this verification exercise were, by review of objective evidence, to confirm whether any evidence existed that the GHG emissions and energy use as declared within the 'Annual Report and Accounts 2020 and Environmental Data Report 2020' report was not: accurate, complete, consistent, transparent and free of material error or omission.

## Declaration and Independence

No member of the verification team has a business relationship with FirstGroup, its directors or managers beyond that required of this assignment. We conducted this verification independently and to our knowledge there has been no conflict of interest.

## Opinion

Based on the data and information provided by FirstGroup and the processes and procedures conducted, Carbon Intelligence concludes with limited assurance there is no evidence that the GHG and energy assertion:

- is not materially correct; and
- is not a fair representation of their GHG emissions, energy information; and
- is not prepared in accordance with the Criteria listed within the Verification Statement.

It is our opinion that FirstGroup has established appropriate systems for the collection, aggregation and analysis of quantitative data for determination of these GHG emissions and energy use for the stated period and boundaries.

The GHG and energy information for the period 01/04/2019 – 31/03/2020 was verified by Carbon Intelligence to a limited level of assurance. 100% of emissions by scope are verified as follows:

- Scope 1 – 2,111,199 tonnes of CO<sub>2</sub>e
- Scope 2 (location-based approach) – 262,070 tonnes of CO<sub>2</sub>e
- Scope 2 (market-based approach) – 42,714 tonnes of CO<sub>2</sub>e
- Scope 3 – 19,670 tonnes of CO<sub>2</sub>e
- 'Out of Scope' – 27,532 tonnes of CO<sub>2</sub>e

100% of energy consumption by scope are verified as follows:

- Total Energy Consumption – 9,607,984,203 kWh
  - Non-UK Energy Consumption – 5,481,620,600 kWh
  - UK Energy Consumption – 4,126,363,602 kWh

## Observations

- Based on our work, Carbon Intelligence considers that material GHG sources are appropriately identified and reported on.
- All material errors in reported data identified during the verification process have been duly corrected.

## Recommendations

- Consider increasing the frequency of data collation and reporting from all divisions within the Group, to at least a quarterly basis. This will allow for improved management information from which future decisions and improved scenario analysis can be made
- The implementation of a strategic data management approach would improve the accuracy of data and would aid resource utilisation and help reduce FirstGroup's environmental impact
- Consider using a value-based approach to capturing and reporting all relevant scope 3 categories as defined in the GHG Protocol.

## Assurance schedule

The following assurance activities cover the reported data in prior years:

### 2019

- Carbon Intelligence conducted a limited level of assurance to the ISO 14064-3 standard
- This included restatements to First Transit and the calculation and public disclosure of the Group's energy consumption ahead of the SECR deadline of 1 April 2019.

### 2018 and 2017

- Carbon Clear Limited conducted a limited level of assurance to the ISO 14064-3 standard
- This included a re-baselining exercise back to 2016 due to the incorporation of SWR on 20 August 2017. See Appendix A: Re-baselining and restatements on page 18.

### 2016

- KPMG LLP conducted a limited level of assurance to the ISAE 3000 and ISAE 3410 standards.

Prior assurance reports are available on the FirstGroup website at [www.firstgroupplc.com/responsibility](http://www.firstgroupplc.com/responsibility)



On behalf of Carbon Intelligence Energy Services Ltd

Lead Verifier: Oliver Smallman

A handwritten signature in black ink, appearing to read "O Smallman".

## Appendix A:

### Our reporting approach

#### Reporting methodology and boundary

This report has been prepared in accordance with the World Resources Institute Greenhouse Gas (GHG) Protocol & Greenhouse Gas Protocol Corporate Accounting and Reporting Standards, applying the operational control approach to our organisational boundary with a materiality threshold of 5% total carbon emissions set by Carbon Intelligence.

FirstGroup undertakes an annual review of its corporate structure to ensure we continue to report a complete picture of our business activities. Significant changes would likely result in re-baselining of our data according to our re-baselining and restatements policies (see page 18).

In 2020/21, re-baselining of carbon, energy and financial information will be completed for Avanti, taking into consideration emissions for the full financial year (2019/20) and where indicated, including these emissions in those from previous years to enable comparison over time.

EURO classifications are in accordance with the EURO emission standard for heavy duty trucks and buses.

All energy figures from liquid fuels are reported using Higher Heating Value (HHV) conversion factors derived of purchased electricity sources with energy attribute certificates dedicated to this supply.

#### Reporting year

FirstGroup's financial year is from 1 April to 31 March. The financial year 2019/20 covers the period from 1 April 2019 to 31 March 2020.

The baseline year for this report is the 2015/16 financial year for both carbon emissions and energy consumption. The following exceptions to the financial year have been consistently applied from our baseline:

Exception	Reasoning	Reported Range
UK and Non-UK fuel and km	Data provided in 'bus year' and 'bus periods' as per the First Bus reporting system	1 April 2019 – 30 March 2020
Non-UK utilities	Data latency is on average one-three months	1 April 2019 – 31 March 2020

#### Reporting scope

We report our direct, indirect and 'out of scope' emissions in the following format, with the following activities comprising each section:

**Scope 1** – Direct emissions from: vehicle use (owned and leased); fugitive refrigerant gas emissions; heating fuels used in buildings, and road and rail fuel use.

**Scope 2** – Indirect emissions from: electricity used in our buildings, and to power our electric rail and bus fleets. We report both location-based emissions (taking into account the UK and US EPA grid average) and relevant market-based emissions (reflecting the amount of energy from renewable sources).

**Scope 3** – Indirect emissions from: First Travel Solutions (including third party vehicle provision); business travel by air; hotel stays; water supply and treatment, and waste recycling and disposal.

**Out of scope** – Indirect emissions from: biofuel usage, including Non-UK biofuels.

This year we have extended the scope of emissions captured under scope 1 to include business car mileage in support of requirements under the Streamlined Energy and Carbon Reporting Regulations 2019.

#### Exclusions

We believe that the activities and emission sources that comprise our total carbon footprint and energy footprint are materially correct. Any areas of our business that have been excluded from our analysis are listed below:

Exclusion	Data Source	Further Information
Non-UK: rail	Diesel (100% mineral) Vehicle km	This is a single service operating in Denton, Texas, and accounts for less than 0.5% of the total diesel footprint of First Transit.
Non-UK: assets	Fugitive emissions	Fugitive emissions are only collected for our fleet. This excluded data is estimated to have an immaterial impact on our total carbon footprint.
First Transit: India and Panama	Diesel Vehicle km	These business divisions operate de minimis and/or on behalf of city transit authorities. Total fuel consumption accounts for less than 0.5% of First Transit's total diesel consumption.
First Bus: fleet and assets	Fugitive emissions Vehicle km Passenger km	Fugitive emissions for our buses in the UK are not reported. Vehicles that have not been attributed to a EURO classification have been grouped in 'EURO 1'. Enhanced Environmentally-friendly Vehicles (EEV) are grouped in 'EURO V'. This grouped data has an immaterial impact on our total footprint.
First Rail: fleet and assets	Fugitive emissions	Fugitive emissions for our trains in the UK are not reported. This excluded data has an immaterial impact on our total footprint. Avanti West Coast does not currently collect information on its asset fugitive emissions. A plan is in place to rectify this for 2020/21 but will not be reported this year.
First Rail: SWR's Isle of Wight Service	Rail electricity Passenger km Vehicle km	Estimated using cost data, the electricity associated with this service is less than 0.1% of SWR's traction electricity consumption. This operation is excluded alongside its associated passenger and vehicle kms.
Tram Operations Limited	Rail electricity Vehicle km Passenger km	This information is outside our operational control boundary.

We review these exclusions annually to ensure they remain immaterial or outside of our operational control. Whilst fugitive emissions are considered immaterial, a standard framework to report fugitive emissions for assets is in development.

## Appendix A: continued

### Our reporting approach

#### Data methodologies and processes

Each year we review the processes by which we collect and collate material information relating to our carbon footprint and energy calculations. This review seeks to understand if any process changes have had a significant effect on our results and whether restatement should be considered. This year we have changed the following processes:

- Biodiesel used as fuel in First Rail is now separated and treated as renewable fuel within this report. We are reviewing the data now available from previous years to determine whether a restatement is required for previous years.
- Partial year data (from 8 December 2019) was included for Avanti. Tables 2 and 3 of this report show what the Group's carbon footprint would have been without the addition of Avanti, to give a meaningful illustration of the underlying year-on-year trend without this change to the portfolio. Full datasets for prior years for Avanti will be reviewed this year to determine the approach for rebaselining, to be published in conjunction with 2020/21 reporting.

The majority of this report follows standard methodologies outlined within the World Resources Institute Greenhouse Gas Protocol Corporate Accounting and Reporting Standard for each scope.

#### Market- and Location-Based Reporting

- Location-based carbon reporting uses a geographical emission factor. These factors are detailed in "Emission and energy conversion factors" section within this Appendix
- Market-based reporting reflects supplier specific carbon emissions from low-carbon electricity contracts. These emission factors are applied, where available, in place of location-based emission factors.

#### Passenger kilometres

Passenger kilometre figures for each of our divisions are calculated in specific ways, as described below:

- Greyhound – calculated using ticket information on passenger start and end destination
- First Bus – calculated using ticket sales information multiplied by the average bus journey length in the 'UK: National Travel Survey – NTS 0303: Average Bus Journey Length (2018)'
- First Rail – calculated using the Office of Rail and Road (ORR) statistical methodology for passenger km, using ticking information. This information is available to First Rail via a national rail system called LENNON
- Car (UK average) – calculated using 2019 data from DfT 'Average Newly Registered Cars' – VEH0150: Vehicles registered for the first time by body type, including average CO<sub>2</sub> emissions for cars and breakdown (2020) divided by 2018 data from DfT 'National Travel Survey – NTS0905: Average Car Occupancy (2019)'
- Car (US average) – calculated using 2018 data from EPA – Greenhouse Gas Emissions from a Typical Passenger Vehicle (2018) divided by 2018 data from DfT 'National Travel Survey – NTS0905: Average Car Occupancy (2019)'
- Domestic Flight (UK average) – Obtained from International Civil Aviation Organization (ICAO) online carbon calculator on 22 June 2020
- Domestic Flight (US average) – calculated using average gallons per km from Table 4-20: US DoT Energy Intensity of Passenger Modes multiplied by the emission factors from EPA EF Hub Emission Factors for Greenhouse Gas Inventories

#### Emission and energy conversion factors

Our two primary emission factor sources in 2019/20 are:

EPA Center for Corporate Climate Leadership; Emission Factors for Greenhouse Gas Inventories	<p><b>North America and Canada:</b></p> <ul style="list-style-type: none"> <li>■ Stationary and mobile fuels</li> <li>■ US average electricity</li> <li>■ Steam and heat</li> <li>■ Business travel</li> <li>■ Fugitive emissions</li> </ul>
BEIS (DEFRA); Government Emission Conversion Factors for Company Reporting	<p><b>UK</b></p> <ul style="list-style-type: none"> <li>■ Stationary and mobile fuels</li> <li>■ Electricity</li> <li>■ Business travel</li> <li>■ Fugitive emissions</li> <li>■ Energy conversion (Higher Heating Value)</li> </ul> <p><b>Global</b></p> <ul style="list-style-type: none"> <li>■ Waste</li> <li>■ Water supply</li> <li>■ Hotel stays</li> <li>■ Out of scope emissions</li> </ul>

The most recent emission factor for each financial year is applied. In each year the following emission factor versions have been used:

Reporting Year	Source	Version
2020	EPA Center for Corporate Climate Leadership; GHG Emission Factors Hub	2018
	BEIS (DEFRA); UK Government GHG Conversion Factors for Company Reporting	2019
	First Rail supplier emission factors	2019
2019	EPA Center for Corporate Climate Leadership; Emission Factors for Greenhouse Gas Inventories	2018
	BEIS (DEFRA); UK Government GHG Conversion Factors for Company Reporting	2018
2018	EPA Centre for Corporate Climate Leadership; Emission Factors for Greenhouse Gas Inventories	2018
	BEIS (DEFRA); UK Government GHG Conversion Factors for Company Reporting	2017
2017	EPA Centre for Corporate Climate Leadership; Emission Factors for Greenhouse Gas Inventories	2015
	BEIS (DEFRA); UK Government GHG Conversion Factors for Company Reporting	2016
2016	EPA Centre for Corporate Climate Leadership; Emission Factors for Greenhouse Gas Inventories	2015
	BEIS (DEFRA); UK Government GHG Conversion Factors for Company Reporting	2015

## Appendix A: continued

### Our reporting approach

#### Re-baselining Policy

To ensure meaningful comparison of emissions data over time and in relation to new business, franchises or developments, FirstGroup will consider re-baselining its carbon footprint and/ or energy data if the following condition(s) is/ are met:

- A single new development, divestment, franchise, re-organisation, or similar business change giving rise to a 5% or more change in gross/ absolute carbon data
- Multiple business changes which alone may impact carbon footprint and/ or energy data below the 5% threshold, yet in combination exceed this
- In the view of the Group Director of Corporate Responsibility, other significant reorganisation of the business, its assets and capital would, on re-baselining enhance transparency or comparability of the Group's carbon and/ or energy performance.

Re-baselining will be undertaken in consideration of guidance within Appendix E of the GHG Protocol Corporate Accounting and Reporting Standard Revised Edition (2005).

#### Restatement Policy

To ensure the provision of high quality, transparent data, FirstGroup will consider restating its carbon footprint and energy data if the following condition(s) is/ are met;

- Raw data or calculations/methods contributing to this data is/ are later found to be inaccurate or misreported
- This identified inaccuracy is giving rise to a 2% or greater change in gross and/ or intensity figures.

Restatement will be undertaken in line with our described methods and processes for each reporting year to ensure a consistent figure is applied (e.g. restating data from 2015/16 would be undertaken using the emission factors and method as recorded in that year).

#### Re-baselining and restatement schedule

The following information provides an outline of any restatements or re-baselining exercises conducted within the data as presented.

##### 2020

- The award of the Avanti rail franchise and its incorporation into First Rail on 8 December 2019 had an impact on our gross emissions and carbon intensities for First Rail. We will be reviewing our data in line with our Re-Baselining Policy to account for Avanti in our 2020/21 reporting year.

##### 2019

- First Transit data was restated due to historical errors in central reporting systems and a calculation error related to CNG conversion to tCO<sub>2</sub>(e). This restatement affected the total scope 1 emissions reported for reporting years 2015/16 to 2017/18.

##### 2018

- The award of the SWR rail franchise and its incorporation within First Rail on 20 August 2017 had a significant impact on our gross emissions. In accordance with our policy, emissions from the years 2015/16 to 2017/18 were re-baselined using figures calculated from data provided in the partial operating year to 31 March 2018.

These updated figures were applied to our intensity calculations, incorporating the associated increase in revenue and passenger km.

No further restatements or re-baselining activities have occurred with the data in this report.

# Glossary and frequently used terms

## Glossary:

- **Avanti** – Avanti West Coast
- **BEIS** – Department for Business, Energy & Industrial Strategy (UK)
- **CNG** – compressed natural gas
- **CO<sub>2</sub>** – carbon dioxide
- **DEFRA** – Department for Environment, Food and Rural Affairs (UK)
- **DfT** – Department for Transport (UK)
- **DoT** – Department of Transport (US)
- **EPA** – Environmental Protection Agency (US)
- **gCO<sub>2</sub>e** – GHG emissions converted to grams (g) of carbon dioxide (CO<sub>2</sub>) equivalent (e)
- **GHG** – greenhouse gas
- **GWR** – Great Western Railway
- **km** – kilometres
- **LNG** – liquefied natural gas
- **NO<sub>x</sub>** – a generic term for the nitrogen oxides that are most relevant for air pollution
- **pkm** – distance travelled by passengers (p) in kilometres (km)
- **PM<sub>2.5</sub>** – particulate matter (2.5 micron diameter)
- **SWR** – South Western Railway
- **SECR** – Streamlined Carbon and Energy Reporting regulations, which took effect on 1 April 2019
- **tCO<sub>2</sub>e, carbon or carbon emissions** – GHG emissions converted to tonnes (t) of carbon dioxide (CO<sub>2</sub>) equivalent (e)
- **TOC** – Train Operating Company
- **TPE** – TransPennine Express
- **vkm** – distance travelled by vehicles (v) in kilometres (km)

## Frequently used terms:

- **All Scopes** – data and statements that refer to scope 1, scope 2, scope 3 and 'out of scope' emissions
- **Location-based carbon emissions** – this calculation uses the average emission intensity of grids in the countries in which we operate for our scope 2 emissions
- **Market-based emissions** – reflecting the emissions of the specific energy providers that have provided our electricity and the range of green power tariffs we have chosen to purchase
- **Non-UK** – referring to locations or operations in Ireland, the United States and Canada. Used for the purposes of reporting compliance with the Streamlined Carbon and Energy Reporting regulations, which took effect on 1 April 2019
- **Out of scope** – indirect emissions from biofuel usage, including non-UK biofuels
- **Scope 1 (direct emissions)** – emissions from activities owned or controlled by our organisation. Examples of scope 1 emissions include emissions from combustion in owned or controlled vehicles, boilers and furnaces
- **Scope 2 (energy indirect)** – emissions associated with our consumption of purchased electricity, heat, steam and cooling. These indirect emissions are a consequence of our energy use, but occur at sources we do not own or control
- **Scope 3 (other indirect)** – emissions as a consequence of our actions that occur at sources upstream or downstream that we do not own or control and are not classed as scope 2 emissions. Examples of scope 3 emissions are business travel by means not owned or controlled by our organisation, waste disposal, materials or fuels we purchases.
- **UK** – United Kingdom, referring to locations or operations in England, Scotland, Wales and Northern Ireland.

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