2024 UEC ROAD EUROPEAN CHAMPIONSHIPS

2024 CARBON FOOTPRINT ANALYSIS REPORT

YOUR SUSTAINABILTY JOURNEY STARTS HERE

TRAINING | CONSULTANCY | CERTIFICATION | CO2 ANALYSIS | NET ZERO STRATEGY

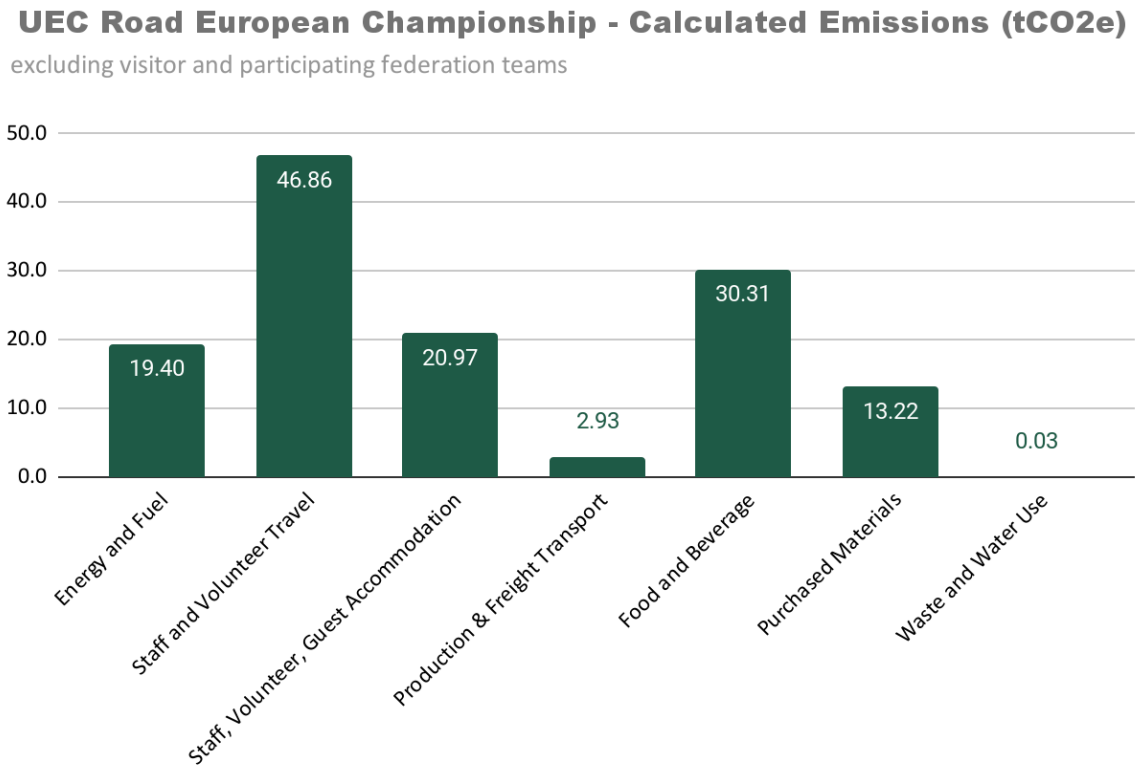
TABLE OF CONTENT

EXECUTIVE SUMMARY - UEC Road European Championship 2024

Flanders Classics engaged with AGF to assess the carbon footprint of the UEC Road European Championship taking place in Limburg. The event was held over 5 days, and attracted an estimated 250,000 visitors.

The boundary of the carbon footprint included the race start and finish locations organised and operated by Flanders Classics, as well as the VIP areas set up at the start and finish points.

The emissions have been calculated using the UK DESNZ emission factors, to align with previous UCI event carbon footprints[1].

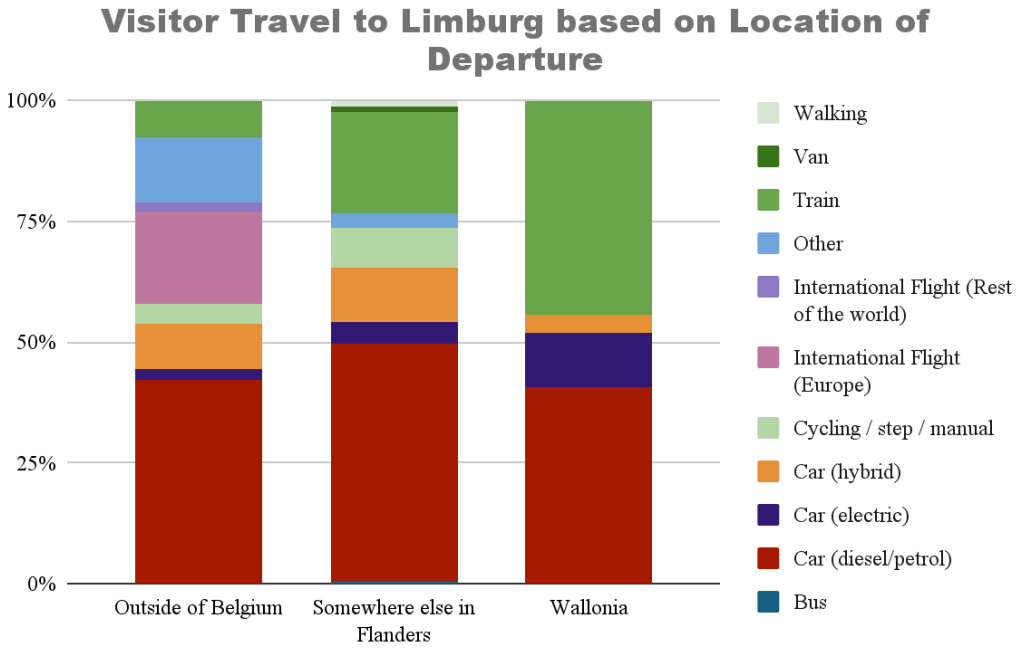


When excluding visitor and participating federation teams travel, the majority of the calculated emissions come from staff and volunteer travel to and during the event. Staff travel in particular includes journeys and commutes relating to the planning of the event which took place over several months.

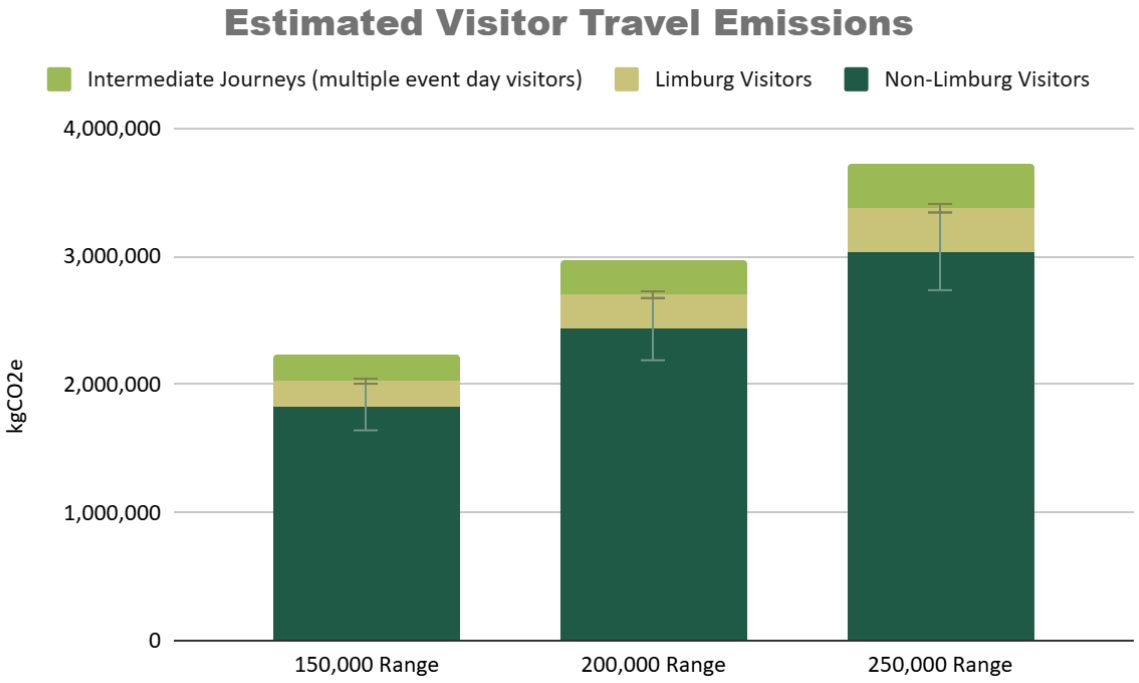
Food and beverages sold represent the second largest source of emissions, with the crew and volunteer catering representing 70% of food-related emissions.

Two surveys were issued to visitors, requesting information on methods of travel, and location of departure, providing insight on how visitors travelled to the event.

[1] UCI ROAD WORLD CHAMPIONSHIPS 2021: SUSTAINABILITY REPORT



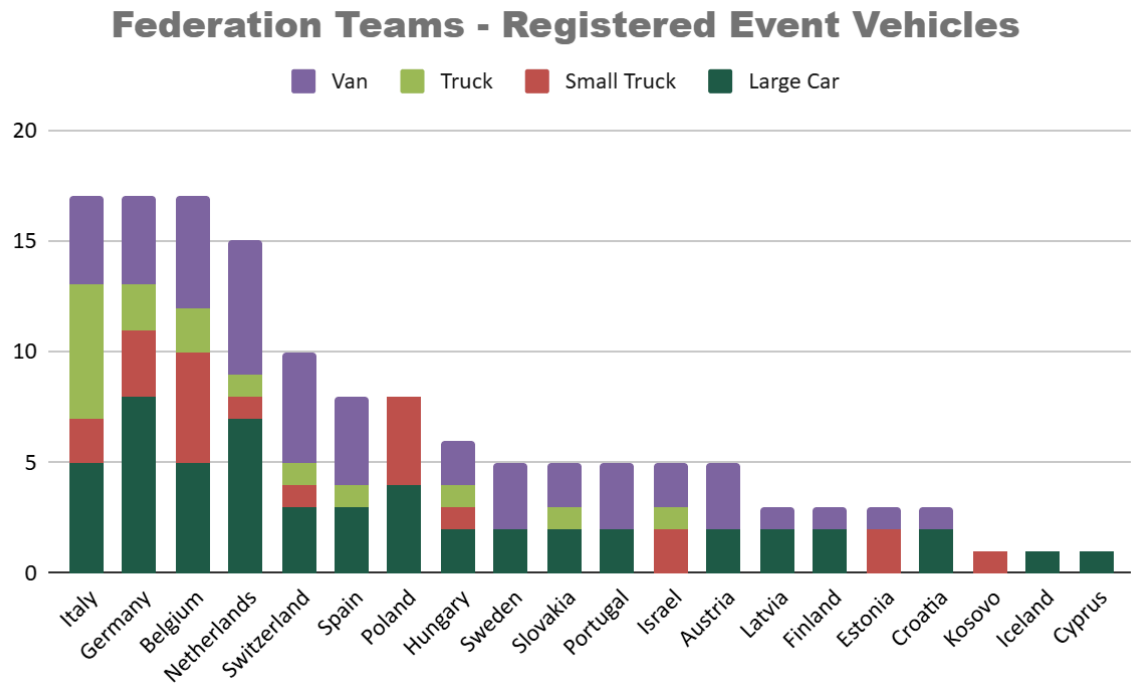
As this was a non-ticketed open event, there is limited data on the number of visitors attending the UEC championship. Based on organiser estimates of attendance ranging between 150,000 and 250,000 visitors, travel emissions could be between 2,000 and 4,000 tCO2e. However, the emissions calculated rely on a number of assumptions, and as a result contain a high degree of uncertainty.



Key limitations

Data was not available for a number of emission sources and categories, namely grid electricity use, water use, participating federation teams and athlete travel, and other third party travel (staff from EBU, UEC, and the Local Organising Committee).

In particular, participating federation teams and athletes travel both to Limburg and during the event is likely to represent a significant source of emissions, as the teams registered a total of 138 vehicles to be used during the race. However, data regarding distances travelled or fuel used by the team vehicles could not be gathered.



Emissions sources excluded from the footprint's boundary include:

- Visitor accommodation emissions.
- The emissions associated with satellite events, such as Borgloon Fan Village, which are not under Flanders Classics & Event Flanders operational control.]
- Digital activities such as website hosting and online marketing and promotion.

2 INTRODUCTION

2.1 Background

About **Flanders Classics and the UEC Road European Championship Limburg**

The UEC Road European Championship 2024 in Limburg was organised by Flanders Classics. Founded in 2009 Flanders Classics (FC) is the official body of cycling races organisers in Flanders, Belgium. Flanders Classics organises seven races across the year, and in 2024 hosted the 2024 UEC Road European Championship in Limburg.

About AGF

AGF (A Greener Future) is an award-winning not-for-profit company, dedicated to helping the event sector to be more sustainable and to reduce environmental impacts. Established in 2005, AGF is internationally recognised for its research, consultancy, management and analysis of sustainability strategies, actions, and communications for the events industry. Its certification based upon the AGF Framework - Greener Festival, Greener Event, Greener Arena, Greener Supplier and Greener Tour - is a gold standard for sustainable event management and delivery. AGF's university accredited training is received by sustainability, venue and event professionals around the world, further building a knowledge base within the industry to drive positive impacts.

2.2 Scope and Boundary of the Report

The methodology used to define the scope and boundaries of the carbon footprint and report the greenhouse gas emissions (as carbon dioxide equivalent CO2e) follow the requirements outlined in ISO 14064-1 and BSI PAS 2060.

Boundary of the Carbon Footprint

The boundary of the carbon footprint accounts for all activities associated with the build, break, and delivery of the UEC Road European Championship by Event Flanders and Flanders Classics. This includes the main start and end locations, as well as the VIP villages at the end and start locations.

The emissions quantified include both direct and indirect emissions.

Excluded Emissions

Due to a lack of available data, the following emissions categories have not been quantified in this report:

- grid electricity use,
- water use,
- participating cycling federation teams and athletes travel
- other third party travel (staff from EBU, UEC, and the Local Organising Committee).

The emissions associated with visitor accommodation, satellite events not organised by Flanders Classics, and digital activities are considered to be excluded from the boundary of the footprint.

The full list of emission sources included and excluded are detailed in Appendix II.

2.3 Report Limitations

The carbon footprint detailed in this report is based on available data provided by Flanders Classics. Data used to develop the carbon footprint includes a mix of primary, secondary data and extrapolations.

Where neither primary or secondary data is available, proxies or estimates are used. These are detailed in Appendix III.

AGF cannot verify all of the data provided by the various parties and has indicated uncertainty levels based on the following considerations:

- Low uncertainty: complete or near complete primary data provided. Limited need for extrapolations or assumptions.
- Medium uncertainty: some secondary data used, limited datasets requiring some estimates, assumptions, or extrapolation. Assumptions for extrapolations or estimations based on client / event data.
- High uncertainty: Limited or incomplete dataset requiring significant estimations, assumption or extrapolations. Limited secondary data requiring the use of proxies, or wider sector benchmarks. Assumptions for extrapolations or estimations based on sector averages or spend data.

Scope	Activity	Description	Uncertainty
1	Stationary Combustion	Fuel (including gas, petrol, kerosene, etc) used or purchased for power generation, and machinery owned or leased by the Event organisers	Low
	Mobile Combustion	Fuel used or purchased for owned vehicles and leased vehicles (hired cars for staff, trucks, forklifts, etc) by the event organisers	Low
	Refrigerants	Release of F-gas and refrigerant gases from cooling and refrigeration equipment.	N/A
2	Purchased Electricity	Emissions associated with supply of electricity through mains grid supply.	No Data
3	Other Fuel Related Emissions	Emissions associated with Well to Tank extraction, refining and transportation of fuels used by the event.	Low
	Visitor Transport	Emissions associated with the transport of the audience to the event. While the event organisers have limited control over these emissions, the location of the event and decisions made by the organisers can influence these emissions. As these emissions are significant, they are accounted for within the event's indirect emissions.	High
	Participant, Guests and Third Party Travel and Accommodation (including federation teams and athletes, UEC, UCI staff, etc)	Emissions associated with the transport and travel of participating federation teams and cyclists, or other guests and event participants, in vehicles not owned or leased by the event organisers.	No Data
	Staff Transport & Accommodation.	Emissions associated with the transport of staff to the event, in vehicles not owned by the festival.	Medium
	Volunteer Transport & accommodation	Emissions associated with the transport of volunteers to the event, in vehicles not owned by the festival.	Medium
	Food, Beverage and Serveware	Emissions associated with the purchase and sale of food, beverage and serveware items sold at the event.	High
	Supplier and Freight Transport	Emissions associated with the transport of contractors, suppliers, and production vehicles, in vehicles not owned by the event organisers. This may include transport of staff hired by the contractors.	Medium
	Purchased Materials, Supplies or Production Items	Emissions associated with the purchase by the event organisers of new production items, supplies or material for the running of the event.	High
	Solid Waste and Recycling	Emissions associated with the processing of solid waste and recycling generated by the event within the event boundaries (e.g. waste generated during event build, on event days, or during the year)	Medium

3 RESULTS

Event Location	Hasselt & Heusden-Zolder Limburg, Belgium	Organisation:	Flanders Classics,
Event Type:	Cycling Championship	Total Daily Capacity	NA
Date:	11th to 15th September	Average attendance per day (Audience)	Estimated 50,000
Event Duration (days):	5		

3.1 Carbon Footprint Overview

Calculated Carbon Footprint

The calculated carbon footprint for the UEC Road European Championship Limburg 2024 (UEC Limburg) was 134 t CO2e, when considering the emissions categories for which data or estimates were available. Visitor travel emissions have been estimated to be in the region of 3,375 t CO2e, based on a total visitor count of 250,000 over the 5 event days.

2024 Carbon Footprint	t CO2e
Energy and Fuel	**19**
Generator Fuel	4.3
Owned/Leased Fleet	7.6
Purchased Electricity (Location-Based)	No Data
Electricity Transmission & Distribution	No Data
Well to Tank	7.521
Out of Scope (Biofuels)	*21.8*
Transport and Hotels	**70.76**
Production / Freight Transport	2.93
Staff Transport & Commute	33.0
Staff & Crew Accommodation	21.0
Volunteer Commute	13.9
Federation Teams and Other Third Party Travel	No Data
Food & Beverage	**30.3**
Food Traders (Public)	4.8
Food VIP Area	2.1
Crew and Volunteer Catering	15.7
Beverages (Public)	1.7
Beverages (VIP)	6.1
Purchased Materials	**13.2**
Serveware	0.1
Production Materials & Supplies	13.1
Waste and Water Use	**0.03**

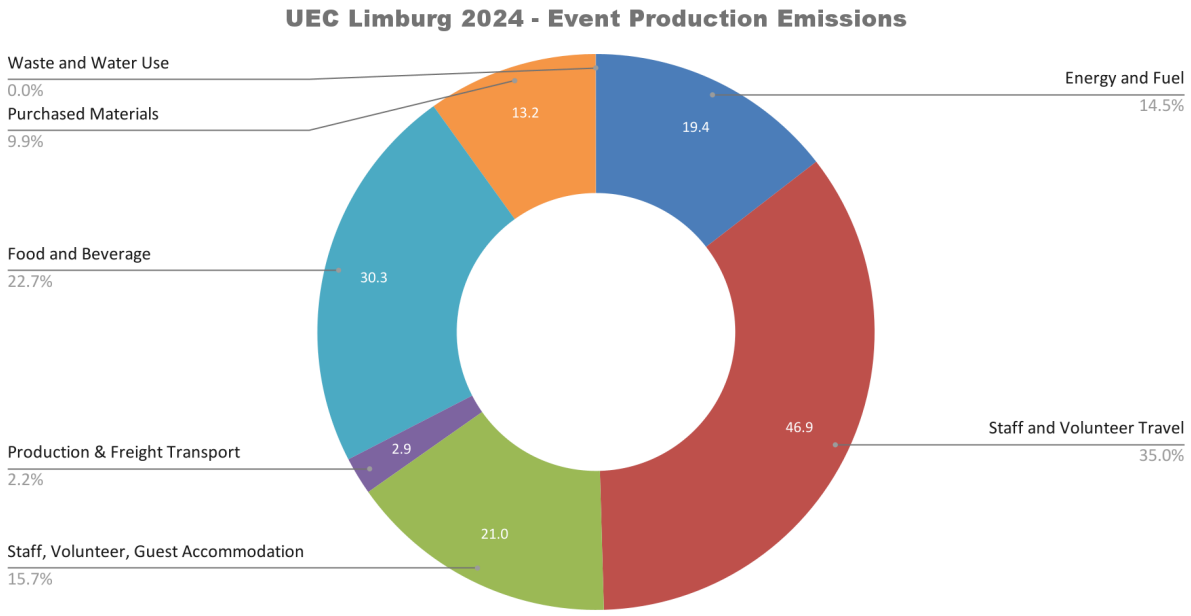
Solid Waste & Recycling	0.031
Water Use	No Data
Wastewater & Sewage	No Data
TOTAL Calculated Emissions (Location-Based)	**133.7**
Visitor Travel (Estimation)	*3,375*
Event Emissions including Visitor Travel Estimations	**3508.8**

The largest portion of the CO2e emissions quantified relate to visitor travel. However, these emissions have been estimated based on the number of visitors estimated by the organisers. As the event is an open, non-ticketed event, the exact number of visitors is not available, and the survey extrapolations therefore contain a high degree of uncertainty.

The emissions associated with participating federation teams and athletes have not been included due to the lack of data. However, as the event welcomes a large number of participating federations from across Europe, these emissions are likely to be significant and should be included in any future UEC or Flanders Classics event footprint.

Event Production Carbon Footprint

Event Production activities include all activities associated with the set-up, production and running of the event. The event production footprint does not include audience transport. The UEC Limburg production activities for which data or estimates were available are detailed in the chart below:



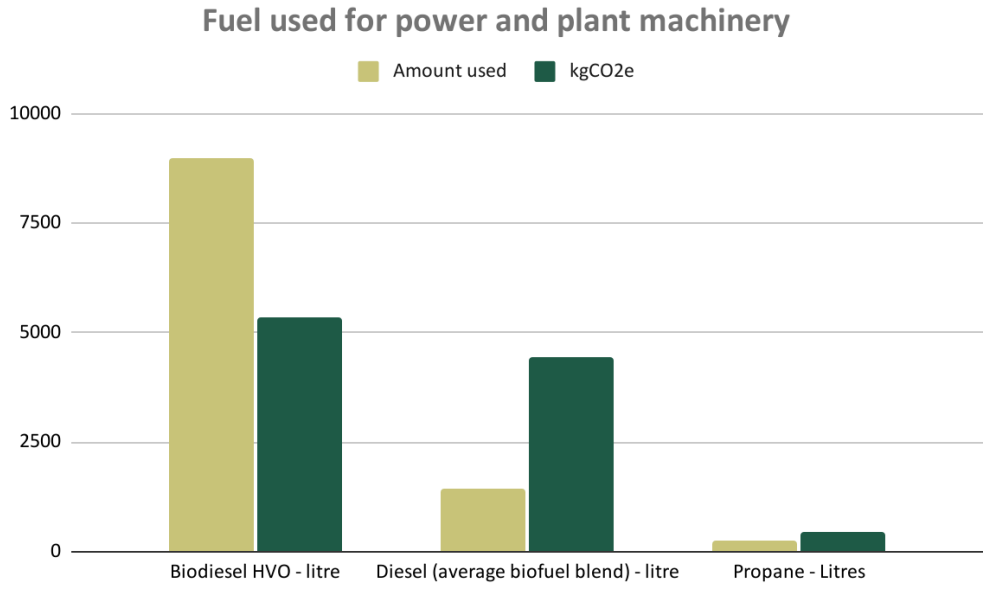
Staff and volunteer travel are the largest event production emissions category, followed by Food and Beverage, and purchased materials. These three categories make up 86% of all quantified event production emissions.

3.2 Energy and Fuel Related Activities

Energy and Fuel	t CO2e
Generator Fuel	4.3
Owned/Leased Fleet	7.6
Purchased Electricity (Location-Based)	No Data
Electricity Transmission & Distribution	No Data
Well to Tank	7.5

3.2.1 Purchased Fuel (Generators and Plant Machinery)

Flanders Classics reported using 8,984 litres of HVO biofuel in generators at the starting and finishing points of the race.
In addition, Panama Events reported using 1,427 litres of diesel for power and plant machinery for the VIP areas, and 260 litres of propane.



3.2.2 Owned and Leased Fleet

Flanders Classics used 19 electric cars to transport key personnel and individuals to and around the event, including judges, doctors and medical personnel, and safety managers. The electric cars also include the race opening cars. A combined 25.536 km were driven by the hired vehicles over the duration of the event.

In addition, shuttles were made available for visitors and staff between Hasselt and Heusden Zolder. Flanders Classics recorded 2,281 litres of diesel and 139 litres of petrol consumed by the shuttles over the duration of the event.

3.2.3 Out of Scope Emissions

Biofuels and biogenic materials such as HVO, only include Methane (CH4) and Nitrous Oxide (N2O) emissions within Scope 1 of a carbon footprint. In accordance with the GHG Protocol[2], the carbon dioxide resulting from the combustion process has been determined to be a net '0', since the fuel source itself absorbs an equivalent amount of CO2 during the growth phase.

However, carbon dioxide emissions still occur at the point of combustion, and are reported separately. These "out of scope" emissions still contribute to local emissions and air pollution, and should be eliminated in the long term.

3.2.4 Refrigerants

Emissions associated with refrigerant and F-gas leaks are typically accounted for on an annual basis. No significant refrigeration or cooling equipment was used at UEC Limburg.

3.2.5 Electricity Use

A proportion of the event's power came from the city's grid connection. However, the city could not provide detailed telemetry or usage data from the event.

The emissions associated with the electricity consumed during the event build, duration, and break could not be quantified.

3.3 Transport and Accommodation

Transport and Hotels	t CO2e
Visitor Travel (Estimation)	3,375.0
Production / Freight Transport	2.9
Staff Transport & Commute	33.0
Staff & Crew Accommodation	21.0
Volunteer Commute	13.9
Federation Teams and Other Third Party Travel	No Data

3.3.1 Visitor Travel Analysis

UEC LImburg is an open event, where visitors can attend the race without specific tickets, and it is therefore difficult to determine an accurate footfall; and to separate the visitors who travelled specifically to attend the event from those who were passing by. Organisers have estimated that approximately 250,000 people attended the event of the 5 race days.

Two surveys were conducted during the event to provide insight into visitors' travel behaviours and feedback on the event:

- Scelta Mobility: surveyed approximately 1,200 visitors and requested information on their province of residence, and how they travelled to the event.

[2] In accordance with the GHG Protocol standard, there are activities not included in a carbon footprint and are reported separately from the three Scopes. This includes the use of biogenic materials such as biomass, biofuels and hydrogenated vegetable oil (HVO). See Appendix I: Out of Scope Emissions for more detail.

- BOP consulting: surveyed 1,024 visitors and requested information on the place of residence, method of travel to the event, distance travelled, and broader qualitative questions.

This represents a 0.4% response rate, and therefore the analysis below is associated with a high degree of uncertainty.

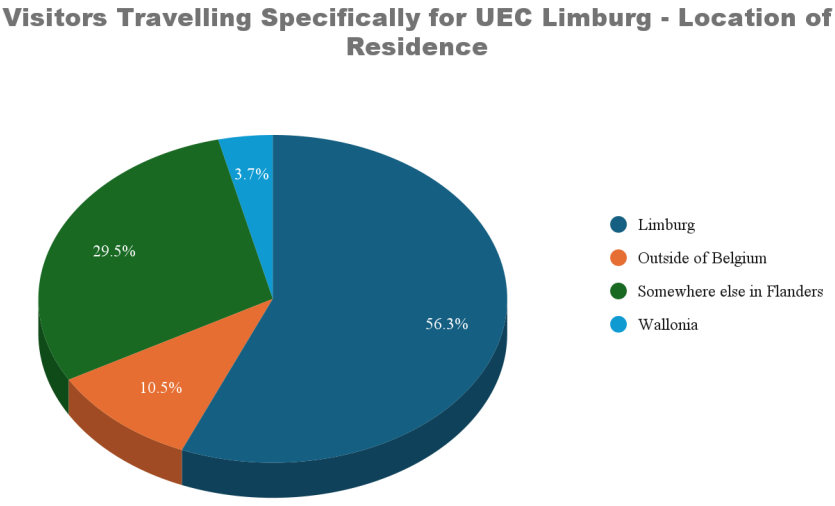
3.3.1.1 Visitor Origins

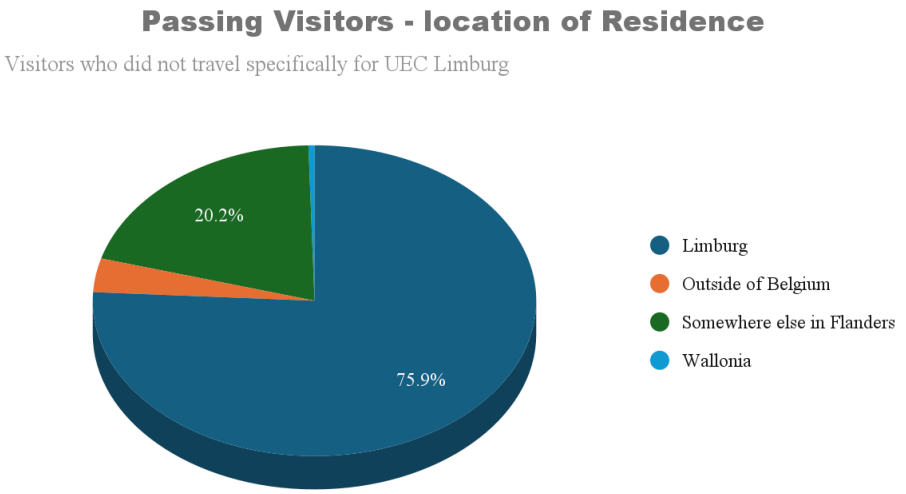
There is a significant difference in responses between the two surveys, particularly regarding the distribution of visitors as highlighted in the table below:

Responses	SCELTA survey	BOP survey
Limburg	84%	61%
Vlaams Brabant	5%	-%
Antwerpen	6%	-%
Other Regions in Flanders	-%	27%
Other Regions in Belgium	5%	3%
Outside of Belgium	-	9%

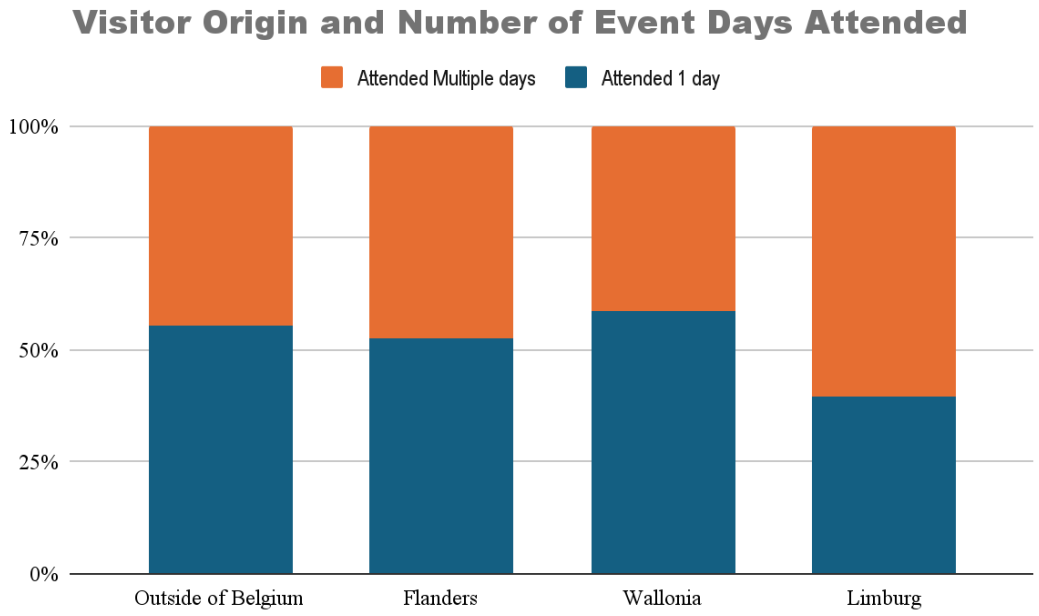
The Scelta survey appears to have recorded how people most frequently travelled within Limburg during the event, while the BOP survey primarily recorded how people travelled to Limburg for the event.

The two charts below highlight the reported location of residence of visitors, with a differentiation between those travelling specifically for UEC Limburg, and those who were 'passing'. Both use data from the BOP survey.





The BOP survey responses also highlighted a relatively even split between visitors attending 1 event day and those attending multiple event days.

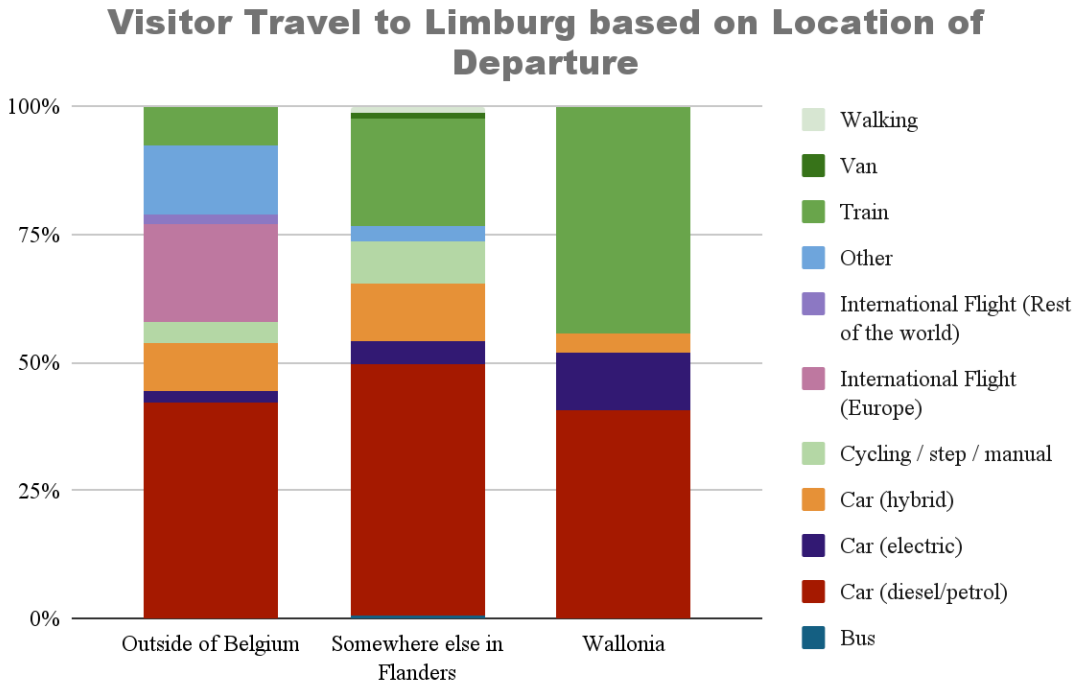


3.3.1.2 Visitors Method of Travel

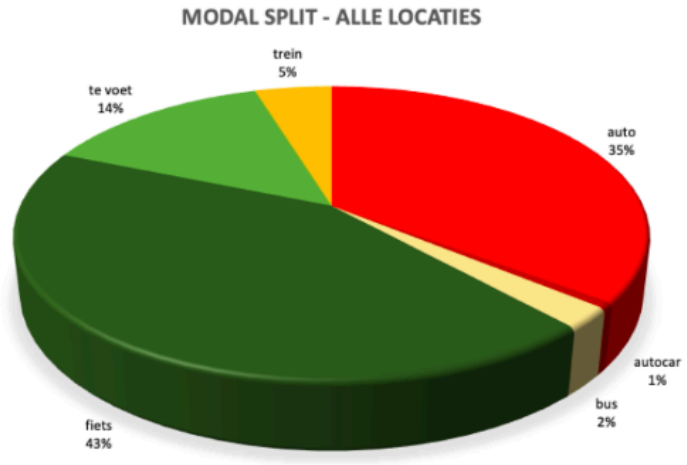
The BOP survey results were used to extrapolate visitor travel behaviour to reach Limburg, and are illustrated in the chart below.

Travel by car remained the most frequent method of travel for all three main visitor categories, although car use decreased significantly for visitors living closer to the event.

Indeed, the percentage of visitors who reported travelling by train increased from 5% for visitors travelling from outside of Belgium, to 21% and 44% for visitors travelling from Elsewhere in Flanders and Wallonia, respectively.



The Scelta survey received over 84% of responses from visitors coming from Limburg, and therefore is used as a proxy for how visitors from Limburg travelled, and how people travelled once in Limburg. The survey results are summarised in the chart below, provided by Scelta.



Within Limburg, the majority of visitors reported travelling by foot or by bicycle, with car use decreasing to 35%.

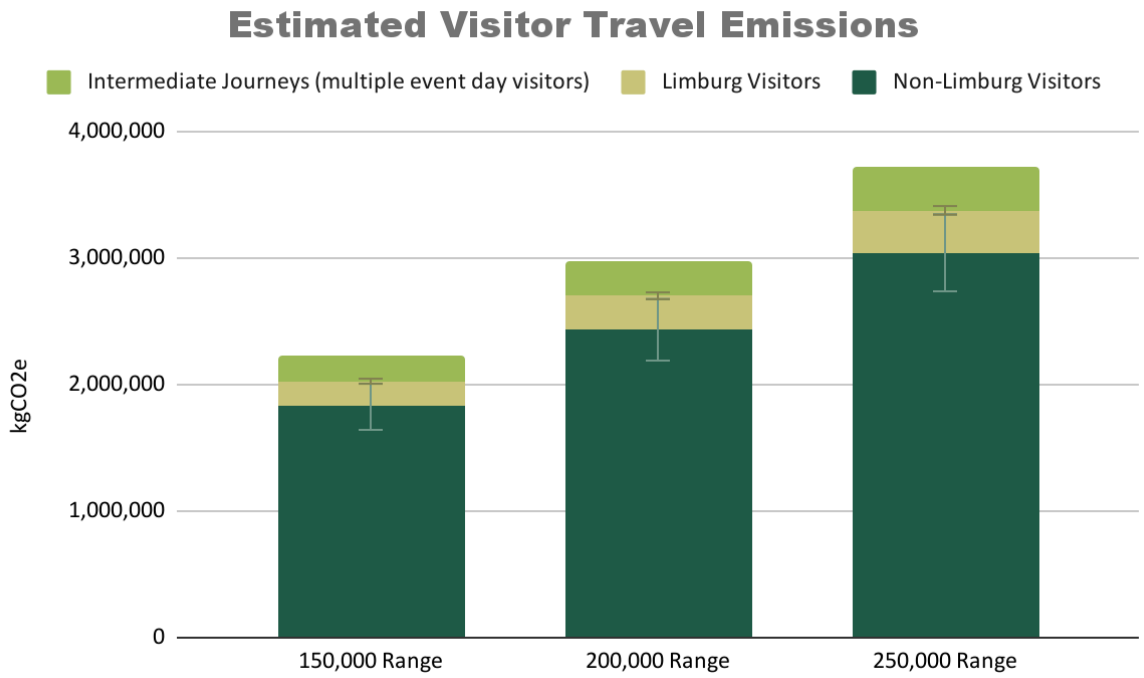
3.3.1.3 Visitor Travel Emissions

To estimate the potential emissions resulting from visitor travel to Limburg for the Championship, the average distances reported in the BOP survey were used (further

detail in Appendix I). The proportion of people travelling to Limburg is also taken from the BOP survey:

- 61% of visitors are from Limburg, and
- 39% are from Belgium or Outside of Belgium.

The Scelta survey was used to estimate the method of travel used within Limburg, and it was assumed that visitors travelling by car, train or bus would travel an average of 50km (return) within Limburg.



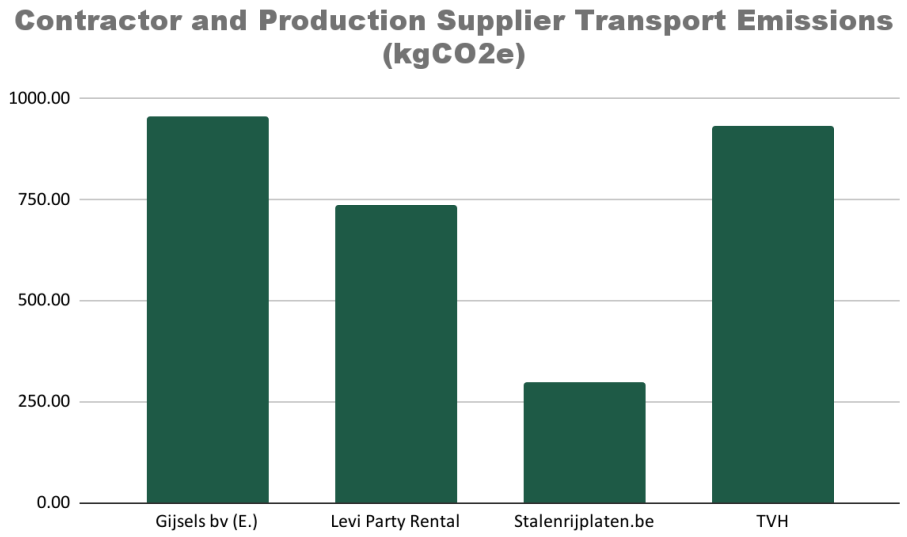
Car emissions account for an average occupancy rate of 1.5 (average reported in Belgium).

The emissions associated with intermediate journeys are based on the assumption that approximately 50% of visitors attended multiple event days (see section 3.3.3.1), averaging 2.5 event days.

3.3.2 Production Transport

Flanders Classics recorded the transport and vehicle movements of the four main production partners and contractors: Gijsels BV, Levi Party Rental, Stalenrijplaten, and TVH.

The breakdown of emissions per company is provided in the chart below.



The majority of journeys were made using articulated trucks and trailers. Gijsel BV provided mobile cranes, and Levi Party Rental used vans for a small number of deliveries.

Vehicle Type	Recorded km	kg CO2e
Van	489	122
HGV Rigid	1,607	956
HGV Articulated	2,226	1,850

The data did not include other smaller contractors and suppliers such as Umami catering, Bevers and Bevers vans, or wider sponsor vehicles. Therefore it is possible that freight and production-related travel emissions are higher than those presented in this report.

3.3.3 Staff / Volunteer Travel and Accommodation

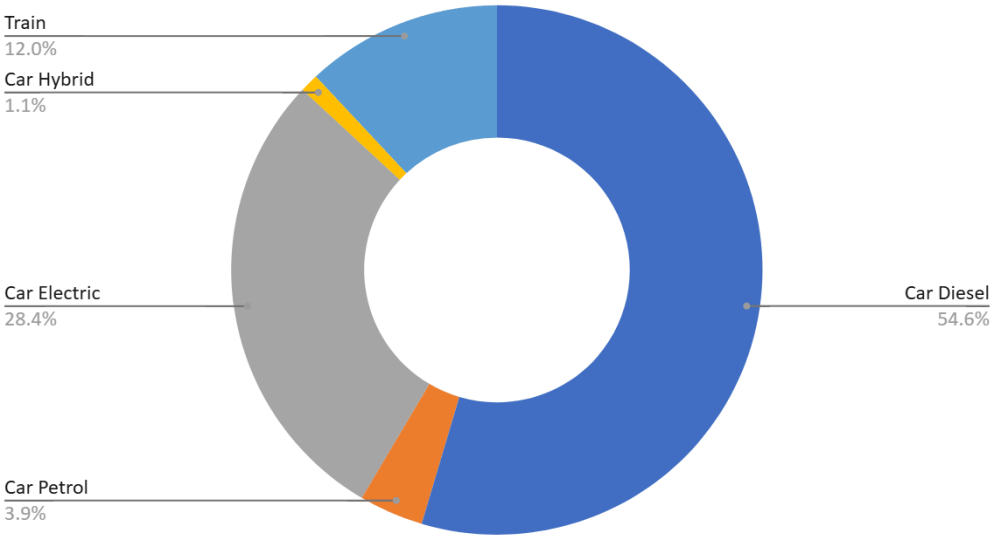
3.3.3.1 Flanders Classics Staff Travel

Flanders Classics recorded all travel associated with the planning and preparation of UEC Limburg for 8 staff members, between April 2023 and September 2024. The results of this sample were extrapolated to the 35 Flanders Classics staff.

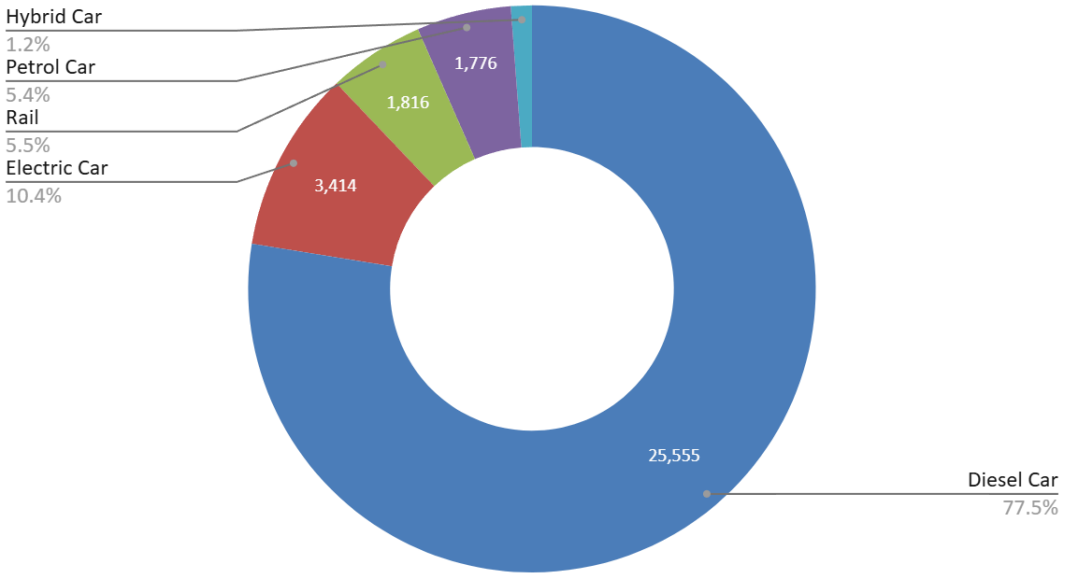
Most of the sampled staff only used one main form of transport as part of their commute and travel. While there was a significant variation in the total distance travelled by staff members (from 1,885 km to 17,907km), the extrapolation is based on the averaged distance from the 8 respondents: 7,877 km.

The chart below highlights the reported total distances travelled by the responding staff, per method of transport. Diesel cars were used for most of the trips by several staff, while electric cars were used by only one staff member but over significant distances.

Staff Distances Travelled per Mode of Transport

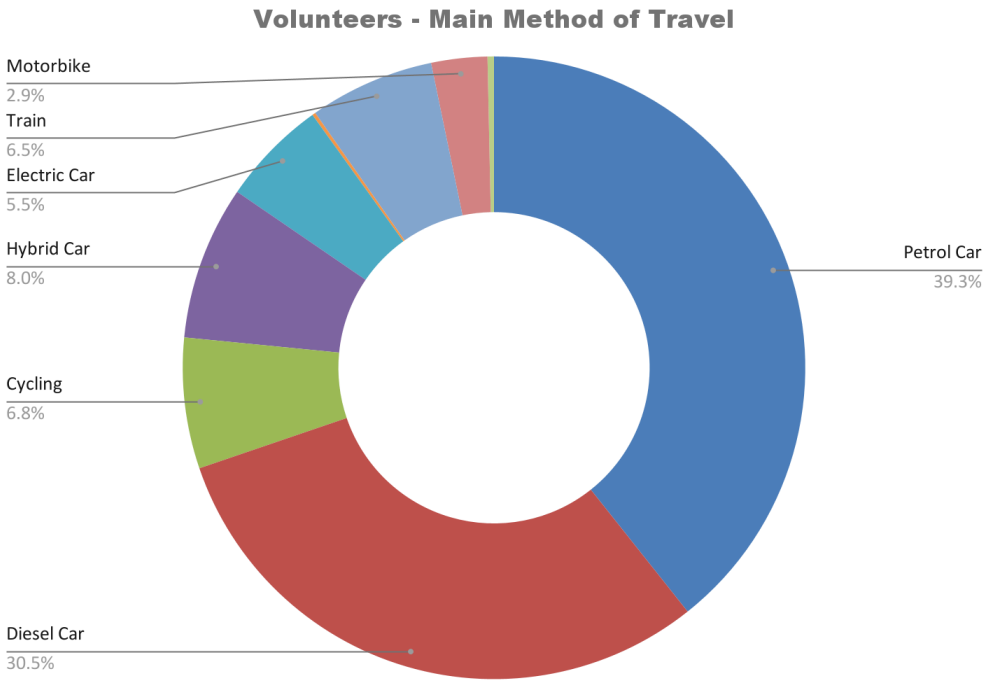


Staff Travel and Commute Emissions (kgCO2e)



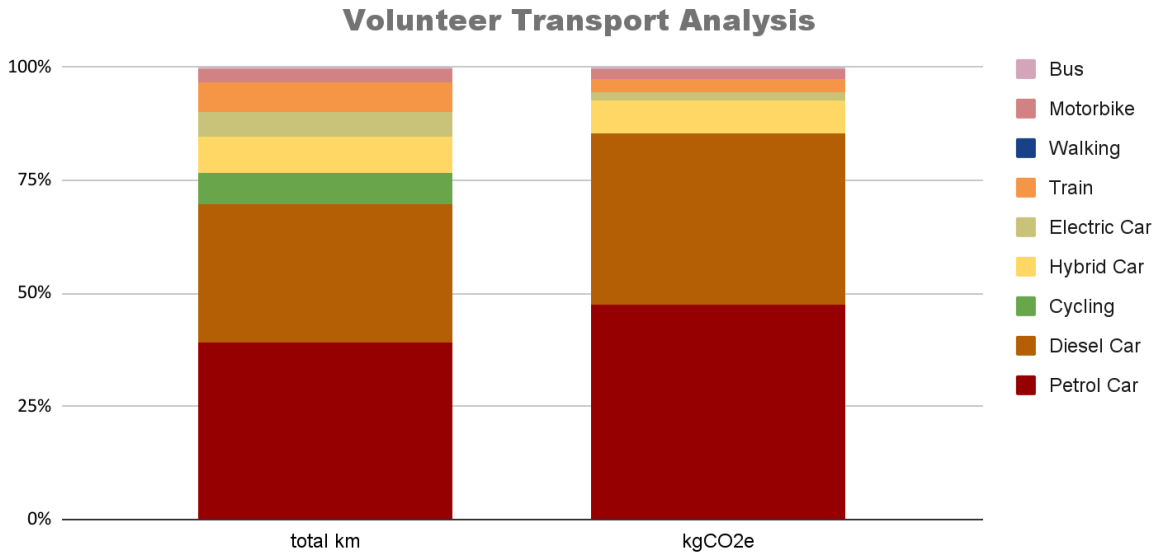
3.3.3.2 Volunteer Travel

500 volunteers took part in the UEC Limburg event. The volunteer travel survey received 178 responses, or a 35% response rate. Most of the volunteers reported travelling by car over the duration of the event, as can be seen in the chart below.



The emissions are extrapolated from the reported total distance travelled by volunteers over the multiple days working at the race.

The majority of the volunteers travelled 50 km or less to attend the event. Only 6% lived within 50 to 100km of the race, and 5% came from over 100km away. The volunteers worked on average 4 event days.



As detailed in the chart above, most of the distances travelled by volunteers were by car, generating 94% of travel emissions. Trains and buses were used for 7% of all distances travelled, but resulted in only 3% of all travel emissions.

3.3.3.3 Staff, Volunteer and Guest Accommodation

Flanders Classics was able to record all accommodation booked for Flanders Classics, UEC and supplier staff and volunteers, with a total of 1,719 room.nights booked over the duration of the event.

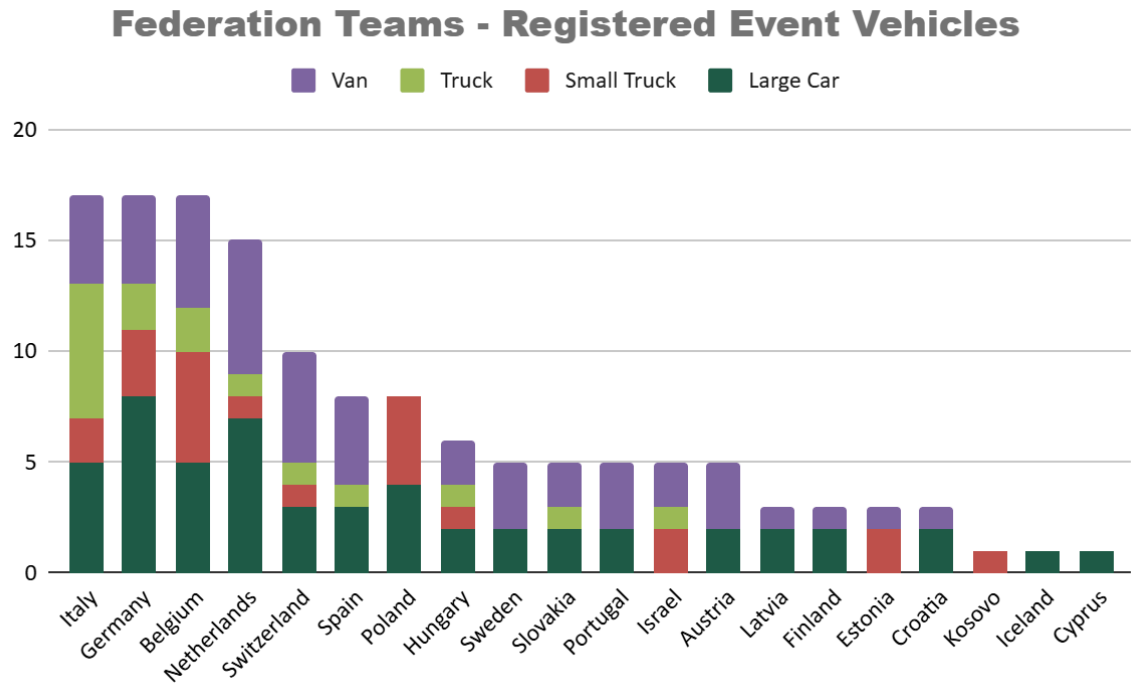
3.3.4 Federation Team and Athlete Travel

Twenty cycling federation teams took part in UEC Limburg, with the largest participating teams being Italy, Belgium, Germany and the Netherlands.

Unfortunately, quantitative data regarding the federation team and athlete travel and transport to UEc Limburg was not available this year.
It was therefore not possible to calculate the emissions resulting from the team and athlete travel to the event, not the emissions from federation team vehicles during the event.

However, it was highlighted that federation teams are required to register their vehicles pre-event, and information was available regarding the number and types of vehicles registered per team (such as support or equipment transport vehicles). This information is summarised in the chart below.

The federation teams brought a combined 138 vehicles to the event, including 53 cars, 38 trucks, and 47 vans.



The larger teams, including Italy, Belgium and Germany registered up to 17 vehicles each. Smaller teams registered between 1 and 5 vehicles, typically vans and large cars.

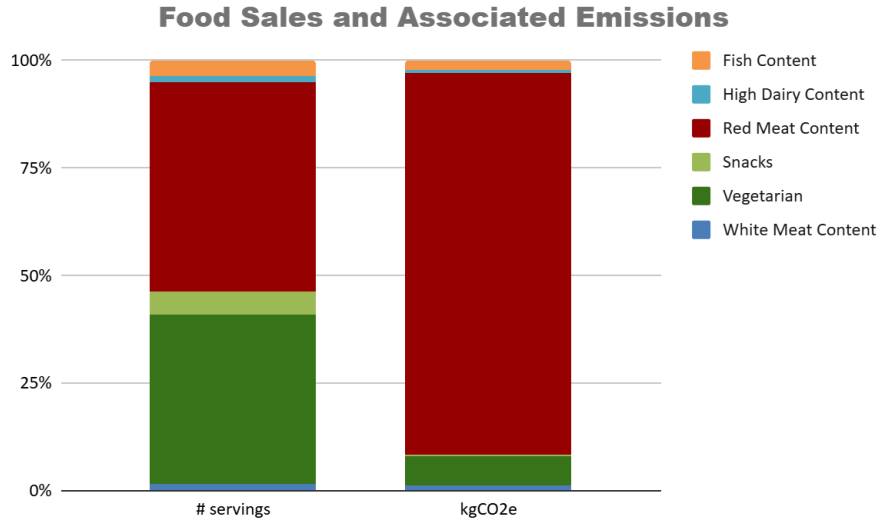
It is not known if these registered vehicles were hired once on site or used to travel from the team countries to Limburg.
As most federation team vehicles were used over the 5 event days, these vehicles are likely to represent a significant source of emissions: assuming each vehicle drove a total of 100km in Limburg over the 5 race days, these could have emitted over 4 tCO2e during the race.

3.4 Food and Beverage

Food & Beverage	t CO2e
Food Traders (Public)	4.8
Food VIP Area	2.1
Crew and Volunteer Catering	15.7
Beverages (Public)	1.7
Beverages (VIP)	6.1

3.4.1 Food Traders (Bevers & Bevers)

Bevers and Bevers (B&B) provided the main catering and food stall for the visitor areas at the Road Championship. The catering company recorded 2,704 food sales, totalling in an estimated 609 kg of food served[3].



The majority of sales consisted of fries (vegetarian), hamburgers and sausages (frikandel and bratwurst). As highlighted in the chart above, the red meat based dishes represent 48% of sales, but are responsible for 88% of food-related emissions.

[3] Portion weights have been estimated, with further detail in Appendix IV

The B&B menu included 3 vegetarian options (fries, pesto penne, and cheese croquettes) and 8 meat or fish based options. Most of the vegetarian options sold consisted of fries.

3.5 Food VIP Area (Panama Events)

The various VIP stands operated by Panama events at the start and finish points served a mix of street food options, and lunch and dinner formulas. Information was provided on the total sales of street food dishes and lunch/dinner formulas, with 1,777 street food portions sold and 595 formulas sold.

While the menu was reviewed, the sales data did not specify the quantity of sales per dish. Panama estimated that approximately one third of sales consisted of the vegetarian options. The majority of these non-vegetarian options consisted of white meat or fish tacos and salads.

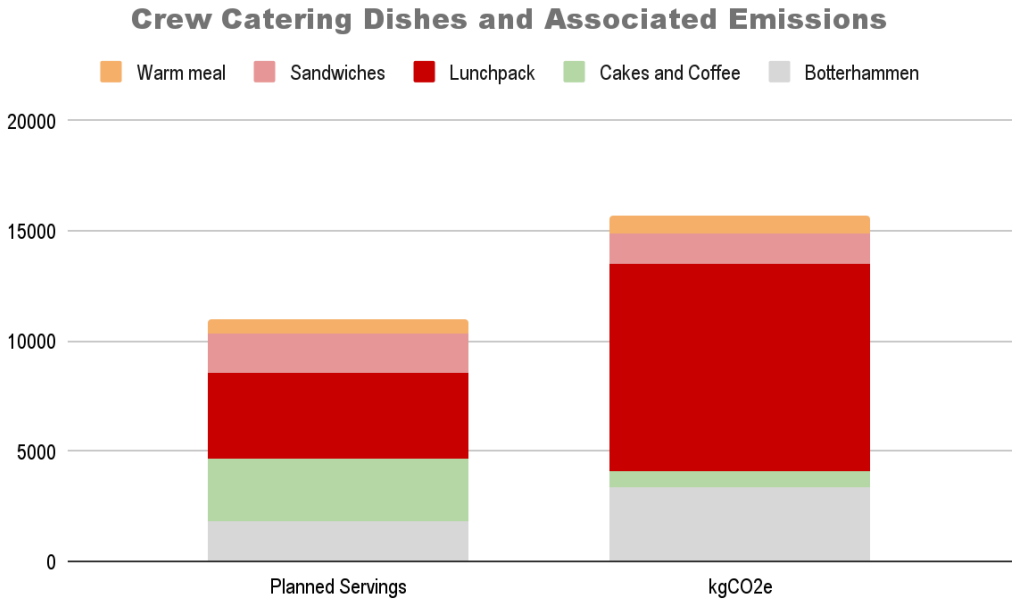
Based on this information, the food-related emissions from the VIP areas have been estimated to be approximately 2.1 tCO2e.

Panama Breakdown	Sales	Estimated emissions (kgCO2)
Meat and fish streetfood	1,183	1,048.6
Vegetarian streetfood	594	245.7
Lunch / Dinner formulas (Average mix of white meat, fish and vegetarian)	596	804.6

3.5.1 Crew and Volunteer Catering (Umami)

The crew and volunteer catering was provided by Umami. Although no post-event data was provided by Umami, the emissions and analysis are based on the event proposal document submitted by the company, listing the planned dishes and number of servings to be provided:

	Planned Servings
Botterhammen	1850
Cakes and Coffee	2844
Lunchpack	3865
Sandwiches	1800
Warm meal	600

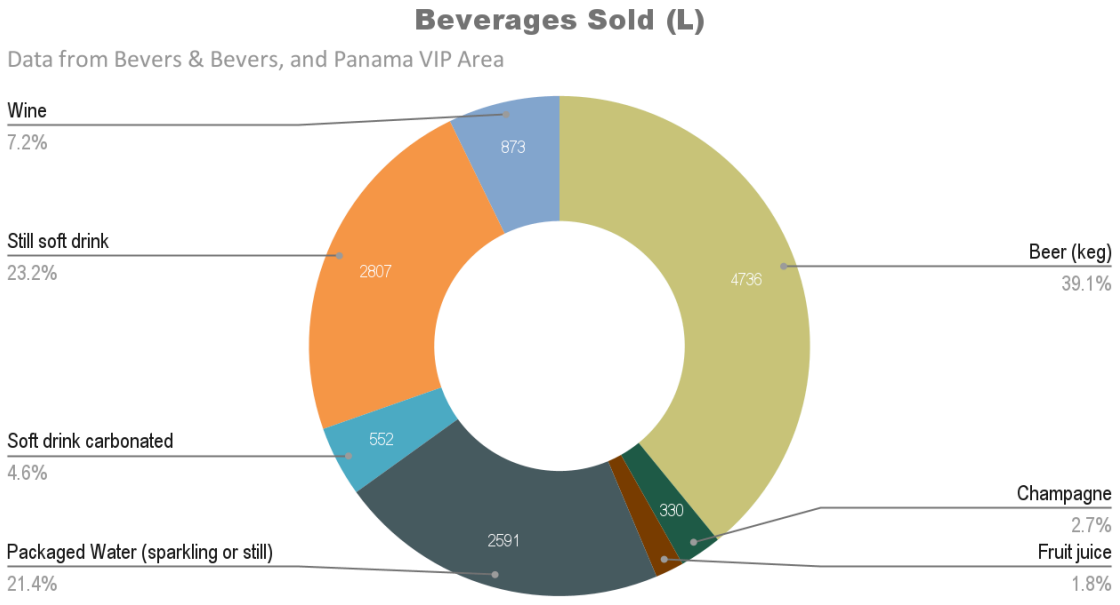


The lunchpacks are noted to have a higher impact, as they included 3 sandwiches, fruit and a drink.

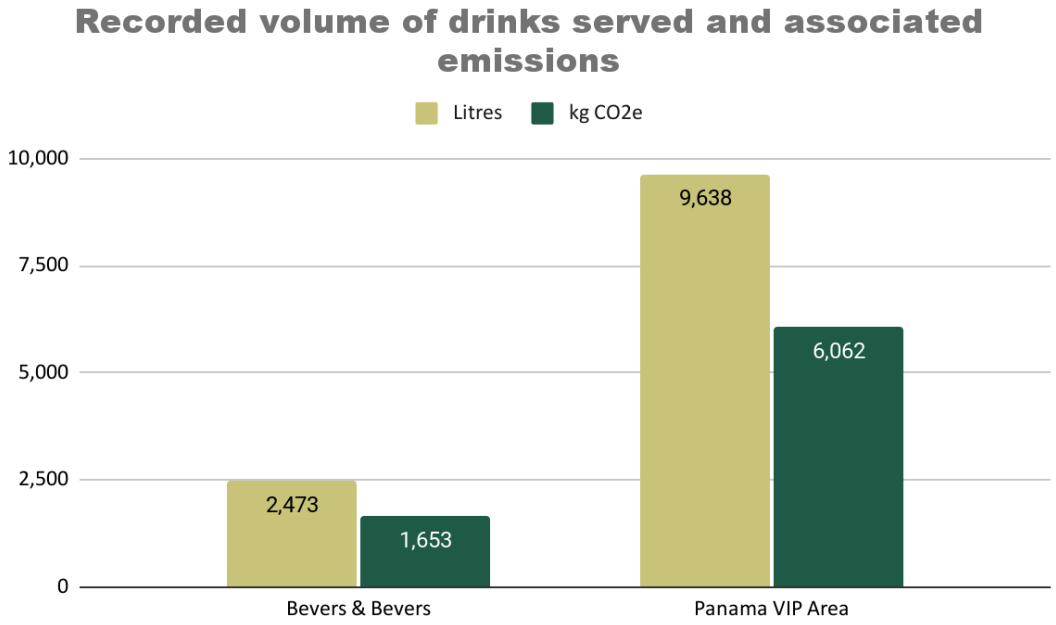
3.5.2 Beverages

Beverages were sold at the main visitor bars operated by Bevers and Bevers, and in the VIP areas operated by Panama Events.

The total recorded volume of beverages sold over the 5 events days was 12,110 litres, with the breakdown per drinks type detailed below:



Most of the drinks sold appear to have been within the VIP areas, with 9,638 litres sold, compared to nearly 2,473 litres sold within the main event areas by Bevers and Bevers.



3.6 Purchased Materials

Purchased Materials	t CO2e
Serveware	0.13
Production Materials & Supplies	13.1

3.6.1 Serveware

All caterers were required to use and provide reusable serveware, including cups, cutlery and plates or bowls. The emissions included in the footprint are associated with the production of new items to replace the losses.

Bevers and Bevers recorded 361 cups losses and 705 bowl losses, representing a loss rate of 4% and 45%, respectively.
Within the VIP Areas, only the cost of serveware loss was available. Assuming that a serveware item cost on average 0.5€, approximately 1,000 items had to be replaced post event.

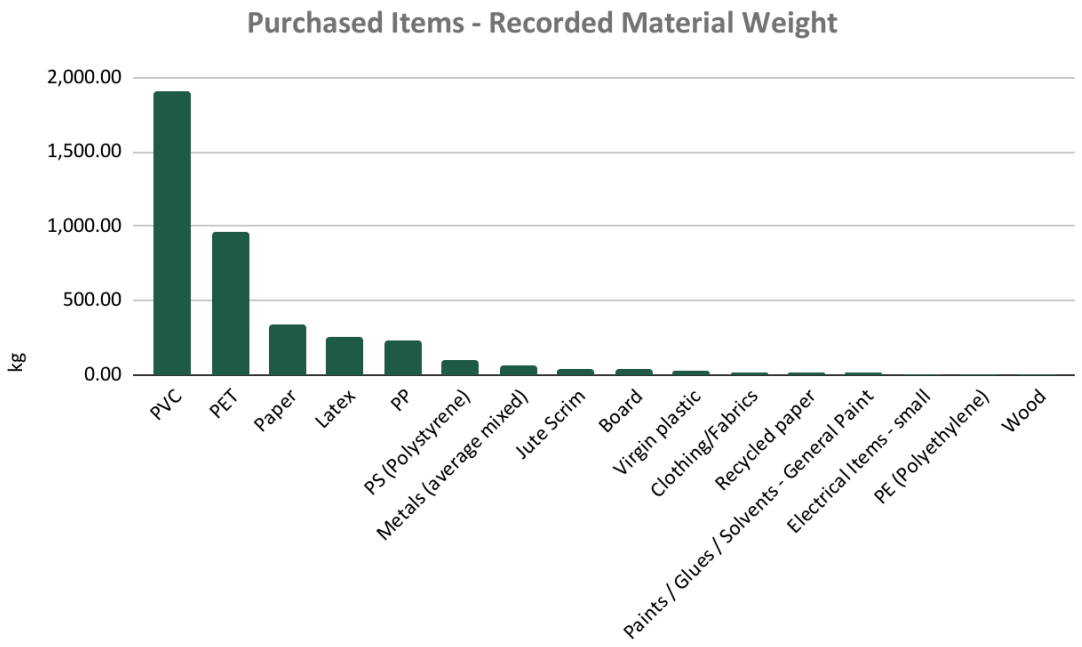
3.6.2 Production Materials

The materials purchased by the organiser and Panama Events specifically for the event included:

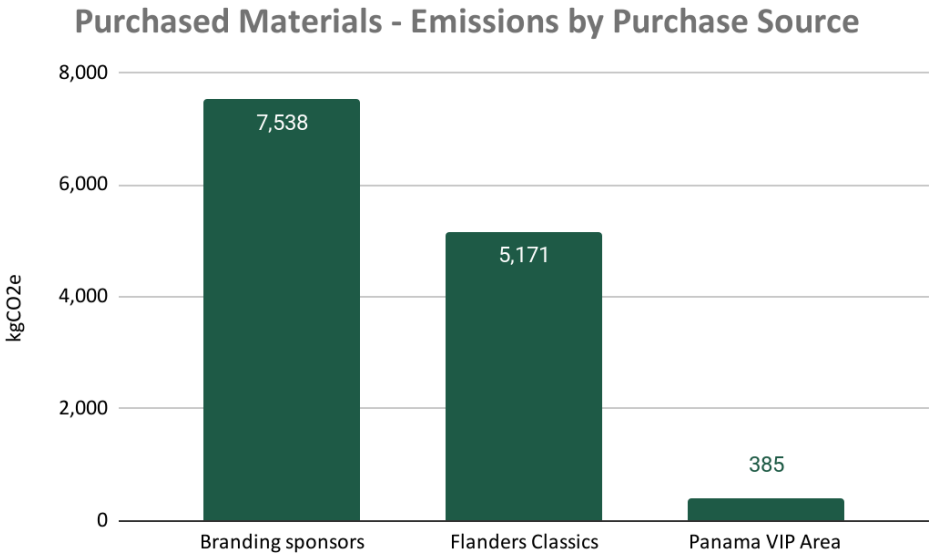
- Signage materials
- Tools and small equipment
- Office supplies

- Badges, wristbands and frameplates
- Scrim

Most of the data included the item raw material, number of items purchased, and item weight. Where this was not available, the purchase value was provided. The emissions have therefore been calculated using a combination of spend-based and material based emissions.



The most significant material purchases related to the signage and branding, which included 1.9 tonnes of PVC and 0.8 tonnes of PET polymesh.

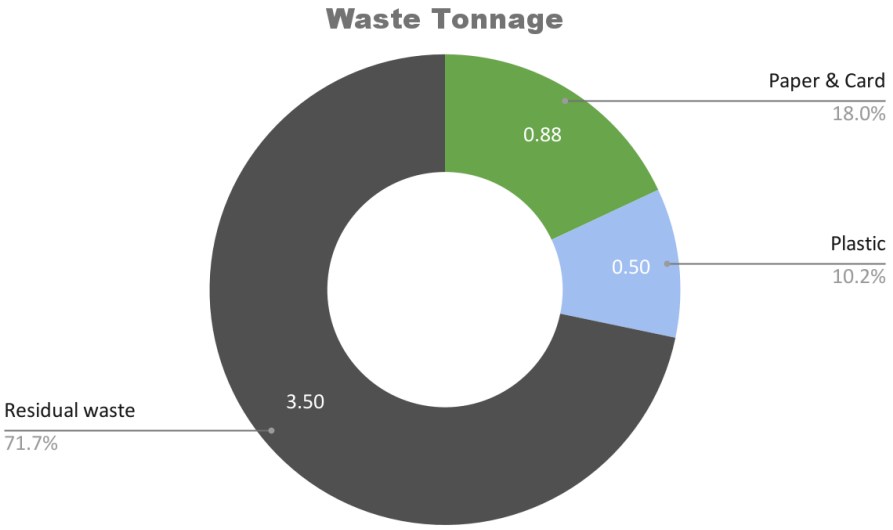


3.7 Waste and Water Use

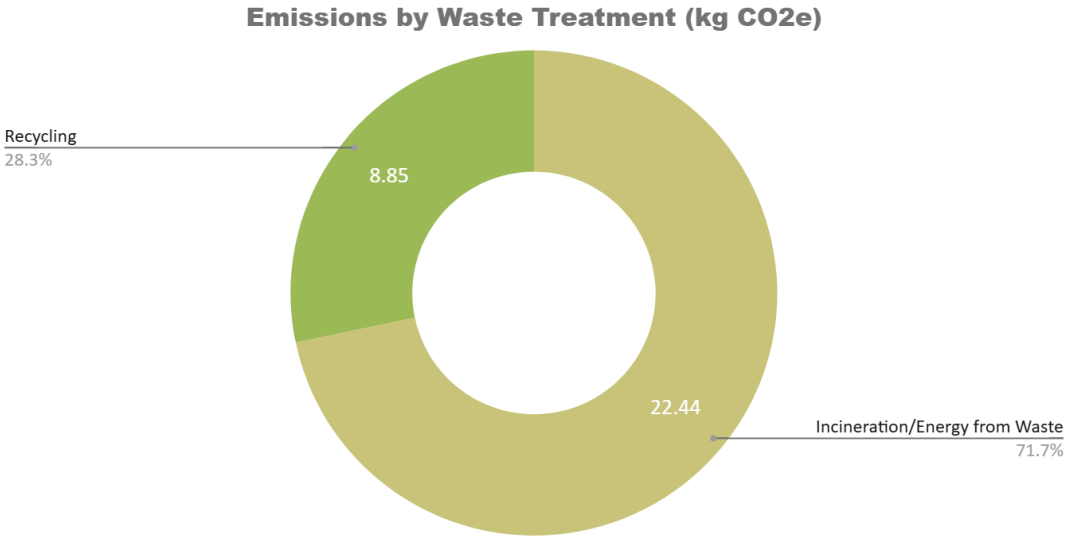
Waste and Water Use	t CO2e
Solid Waste & Recycling	0.03
Water Use	No Data
Wastewater & Sewage	No Data

3.7.1 Waste and Recycling

Flanders Classics recorded a total of 4.88 tonnes of waste from the start and finish sections, and the VIP Areas. The majority of this waste was classified as general and residual waste, and was sent for energy from waste treatment.



The event reported a 28.3% recycling rate, mainly through the segregation of paper, cardboard and plastic from general waste.



It is important to note that the UK DESNZ emission factors for waste only account for the transport of the materials to the waste processing plant. This is because the emissions from energy recovery, recycling, composting and anaerobic digestion are attributed to the user of the recycled materials, not the producer of the waste.

3.7.2 Water Use & Wastewater

The water supply and wastewater to sewage was not metered or monitored, and as a result the emissions associated with the water supply or wastewater processing could not be quantified.

It should be noted that whilst water use and wastewater treatment has relatively low CO2e impact compared with other measurable event factors, it should be taken as an important area for continued monitoring and reduction in its own right as a valuable resource.

4.1 Priority Actions

Recommendations to reduce the event's environmental impact have already been made in the Sustainability Assessment Report. As a result, the recommendations in this section will focus on how to improve the measuring and monitoring of emissions associated with these activities, and how to reduce and offset these emissions.

Based upon the carbon analysis completed in this report, the following priority actions are recommended as next steps for Flanders Classics:

- Continue with the data collection processes for the activities included in this carbon assessment report, to provide a comparable assessment in 2025 or for future events.
- Plan for the collection of data for participating federation teams, athletes, and other third party guests (UEC, Belgian Cycling, etc), to provide a more complete account of travel emissions relating to race events. This could be captured during the registration process to limit any duplication of effort, particularly if federation teams and athletes are required to sign in individually and register their vehicles..
- Engage with city councils or plan for the collection of grid electricity data prior to the event, to ensure that the necessary information is available post event to monitor overall energy usage and identify efficiencies.
- Review the carbon footprint report to identify emissions hot spots which may benefit from internal investments in order to reduce the emissions of future races and events organised by Flanders Classics.
- Consider setting out a carbon reduction plan, either standalone or as part of the broader sustainability strategy, and outlining Key Performance Indicators (KPIs) to measure improvements and reduction targets. A number of KPIs are suggested below.

Key Performance Indicators	2024	Unit
Calculated Emissions *Including estimated visitor travel emissions*	3,508.8	t CO2e
Event Production Calculated Emissions **Excluding Federation Team and Athlete Travel*	133.7	t CO2e
Estimated Average Visitor Travel Emission pppd **Based on a 250,000 estimation, or 50,000 per day.*	13.5	Kg CO2e
Average Food-Related Emissions per Serving **Sales from Panama Events and Bevers & Bevers*	1.4	Kg CO2e
Average travel emissions per volunteer **Over the 5 event days*	27.8	Kg CO2e
Average generator fuel use per day **Over the 5 event days*	1,797	Litres
Average waste per day **Over the 5 event days*	976	kg
Recycling Rate	28.3%	

4.2 Action Plan

Specific actions to reduce the emissions quantified in sections 3.2 to 3.7 are detailed below

Target Activity or Emissions Source	Recommendations	Potential Impact
Energy And Fuel	• Where feasible, increase the use of grid electricity to power the event. • Engage with local electricity providers or the city council to confirm that the data necessary to monitor energy use can be made available post-event.	Reduce fuel use.
	• Request that any third parties or contractors hired for the event also make use of grid energy or biofuels, as an alternative to fossil fuels. • This could be incorporated into a sustainability charter which contractors and third parties must follow.	Reduce fuel use
	• Continue to follow the power hierarchy when planning the power requirements for future events: prioritising reductions in energy	Reduced fuel use

Target Activity or Emissions Source	Recommendations	Potential Impact
	requirements, grid electricity, hybrid generators, and lastly biofuel generators.	
	• If hiring or organising shuttles for the event, consider utilising electric shuttles if these are available. • Alternatively, consider using shuttle buses which can use HVO as a drop-in fuel.	Reduced fuel use.
Visitor Transport	• Consider collecting visitor travel information via one main survey, or aligning survey questions if different surveys are conducted.	Improved data quality
	• Continue to provide shuttle buses where feasible to incentivise public transport travel between the different event locations. • Consider introducing shuttles between key transport hubs (railway station, bus station, etc) or other neighbouring locations.	-
	• Consider engaging with local transport operators to incentivise travel by public transport during the event. This may include discounts on train or bus tickets, or adding additional transport connections between neighbouring cities.	Increased use of public transport.
Production and Crew Transport	• Engage with contractors and suppliers to reduce or rationalise any trucking or freight during the event. • Where possible, identify and engage with freighting or logistics suppliers who provide low-emissions vehicles.	Reduced freight and transport emissions.
	• Engage with all contractors and production suppliers pre-event to plan for the collection of transport data for the vehicles used, such as van, trucks and cars.	Improved data quality.
	• For crew, staff, and event participants, plan for the collection of travel and transport data at registration stage, to limit duplicating efforts..	Improved data quality.
Federation Team Transport	• The emissions from participating federation teams and athletes are likely to represent a significant proportion of the overall event's emissions. Future cycling events organised by	Improved data quality.

Target Activity or Emissions Source	Recommendations	Potential Impact
	UEC or Flanders Classics should plan for the collection of federation team transport data. ***Travel to the Event*** Request the following information from federation teams, either at point of pre-registration or once onsite: • Method of transport used to travel to the event location, for all members of the federation team. • Location of departure or distance travelled from their residence to the event location, for each member. • For any owned or rented vehicles used by the team, the distance travelled per vehicle to reach the event location. This specific information could be requested in the Team Vehicle Details Form. ***Travel during the event*** Request or plan for the collection of travel and transport data during the event, particularly for federation team vehicles: • The overall amount of fuel used by rented, or owned vehicles, for each team, over the duration of the event.	
	• Encourage federation teams to use or hire hybrid and electric cars during the race.	Reduced transport emissions.
Food & Beverage	• Consider requesting that caterers provide, at a minimum, a 50 / 50 split of vegetarian and meant-based dishes.	Reduced food-related emissions.
	• Consider reducing or removing red meat dishes from the menus.	
	• Consider requiring caterers and bar providers to avoid any plastic packaged drinks, in favour of reusable servings or canned drinks.	-
Purchased Materials	• Prioritise using refurbished or repurposed materials, where possible.	

Target Activity or Emissions Source	Recommendations	Potential Impact
	• For any new material purchases, especially signage, prioritise - Low-carbon materials - Materials made from recycled content - Materials which can be reused over multiple events.	
Waste and Water use	• Before purchasing new materials, identify suitable recycling or reuse options post-event. For example, If purchasing beachflags or scrim, identify suitable third-parties who may be able to recycle or reuse these materials. Consider only purchasing materials for which recycling or reuse pathways have been identified.	

5 METHODOLOGY

Organisational and Operational Boundary

Organisation Boundary

The organisational boundary defines the operations, assets, or activities which are included within the carbon footprint. For the purpose of this report, AGF is using an Operational Control consolidation approach, when measuring all the activities involved in the design, planning, execution and dismantling of the UEC Road European Championship.

Operational Boundary

The operational boundary identifies the sources of emissions activities within the defined organisational boundary and categorises these into direct emissions (sources of emissions which Flanders Classics owns or has direct control over) and indirect emissions (sources of emissions which are owned or controlled by another company).
These emissions sources are categorised into three scopes, further detailed in Section 2.4.

Including/excluding criteria

Emissions sources have been included if they fall within the organisational boundary, either as direct emissions or indirect emissions.

To decide which emission sources are relevant the following criteria have been used:

- Materiality or significance of the emissions of the source with respect to the total emissions of the organisation. AGF aligns with PAS 2060's definition of material as emissions accounting for more than 1% of the total carbon footprint.
- Availability of auditable data (lack of information)
- Relevance for interested third parties (participants, local community, authorities, suppliers, etc.)
- Existence or not of emission reduction potential.

Excluded emission sources are detailed in Appendix I.

Calculation Methodology

The quantification methodology follows the Greenhouse Gas (GHG) Protocol Standard for Scope 1, Scope 2 and Corporate Value Chain (Scope 3).

The general methodological basis for calculating the emissions derived from these activities is always the same, consisting of the application of the following formula:

Carbon Footprint (t CO2) = Activity Data x Emission Factor

Where:

- Activity data = the parameter that defines the activity and that is related to the emission factor (for example, m3 of natural gas)
- Emission factor = amount of CO2 emitted by each unit of the "activity data" parameter (for example 2.16 kg CO2 / m3)

- The unit used to expose the results (t CO2) = representation of the equivalent tonnes of CO2, the universal unit of measurement that indicates the global warming potential (GWP) of each of the GHGs.

Emission factors

Data gathering covers, in addition to the activity data, the secondary data (conversion factors and emission factors) applicable to them.

These factors have been obtained from reliable and updated published sources. In the case of the UEC Road European Championship, the emission factors used follow the recommendations from the Belgium government to use available BE specific factors for fuels, and ADEME factors for scope 3 emissions.

- UK DESNZ Emissions Factors 2024
- Agribalyse Agricultural and Food Database

6 APPENDIX

I. Visitor Travel Survey Data

Reported Method of Transport			
Transport	**Outside of Belgium**	**Somewhere else in Flanders**	**Wallonia**
Bus		0%	
Car (diesel/petrol)	65%	49%	41%
Car (electric)	1%	5%	11%
Car (hybrid)	6%	11%	4%
Cycling / step / manual scooter	2%	8%	
International Flight (Europe)	12%		
International Flight (Rest of the world)	1%		
Other	8%	3%	0%
Train	5%	21%	44%
Van		1%	
Walking		1%	

Average Reported Distances (one way)			
Transport	**Outside of Belgium**	**Somewhere else in Flanders**	**Wallonia**
Bus		40.00	0,00
Car (diesel/petrol)	108.65	102.79	91.17
Car (electric)	270.00	129.83	170.00
Car (hybrid)	115.00	98.93	120.00
Cycling / step / manual scooter	65.00	50.82	
International Flight (Europe)	941.50		
International Flight (Rest of the world)	1,700.00		
Other	345.71	121.88	
Train	217.00	109.20	106.81
Van		85.00	
Walking		21.00	

II. Out of Scope Emissions

In accordance with the GHG Protocol standard, there are activities not included in a carbon footprint and are reported separately from the three Scopes. This includes the use of biogenic materials such as biomass, biofuels and hydrogenated vegetable oil (HVO). While these materials can produce fewer GHG emissions than fossil fuels and may be grown and used on a shorter time horizon, it still produces a variety of GHG emissions that are accounted for differently in a carbon footprint. Emitted methane (CH4) and nitrous oxide (N2O) emissions from biogenic energy sources shall be reported in the scope of the activity, while carbon dioxide emissions shall be reported outside the Scopes. For example, CH4 and N2O emissions for biofuels used in generators on site are reported in Scope 1 while CH4 and N2O emissions for biofuels used by contractor transportation are reported in Scope 3.

HVO is produced from waste feedstocks such as fats and vegetable oils; is considered a cleaner fuel than Diesel or FAME (Fatty Acid Methyl Ester – bioDiesel). Given that HVO is biogenic material, it is accounted for differently in a carbon footprint. The kg CO2 during combustion is considered lower than for regular diesel , as the equivalent amount of CO2 absorbed during the growth phase is discounted from the emissions generated during combustion.

However, full reporting of any fuel from a biogenic source should have the biogenic CO2 value documented to ensure complete accounting for the emissions created.

The Out of Scope emissions associated with the combustion of HVO Biodiesel during UEC Limburg were 21.8 tCO2e.

Out of Scope Emissions	Carbon Emissions (kg CO2e)		
	Within Scope	Out of Scope	Total
HVO - Biodiesel CH4 and N2O emissions are within scope. CO2 emissions are out of scope.	319.65	21,831.12	22,150.77
Equivalent Use of Traditional Diesel (Average Biofuel Blend)) CH4, N2O and CO2 emissions are within scope.	22,568.38		22,568.38
Savings	22,248.73	-	417.61

III. Emissions per Scope

	Year
Total Carbon Footprint By Scopes (t CO2e)	**2024**
Scope 1	**11.9**
Purchased Fuel	4.3
Owned/Leased Fleet	7.6
Refrigerants	N/A
Scope 2	**0.0**
Purchased Electricity (Location-Based)	No Data
Purchased Electricity (Market-Based)	No Data
Scope 3	**3497**
Visitor Travel (Estimation)	3,375.0
Freighting Goods	2.93
Staff Transport & Commute	33.0
Staff & Crew Accommodation	21.0
Volunteer Commute	13.9
Federation Teams and Other Third Party Travel	No Data
Purchased Materials (Food and Beverage)	30.3
Purchased Materials (Production Items and Serveware)	13.2
Waste and Water Use	0.03
Other Fuel and energy related activities	7.521
TOTAL Calculated Emissions (Market-Based)	**3,509**
Out of Scope (Biofuels)	21.8

IV. Included and Excluded Emissions

Emission Source	Included	Excluded / No data
Stationary Combustion	Fuel use from power generators at Start, Finish and VIP sections. Combustion of propane in VIP sections	
Mobile Combustion	Vehicles leased or rented by the event. This includes electric vehicles and shuttles used by Flanders Classics, Plant machinery used by Flanders Classics and Panama Events.	
Refrigerants	N/A	
Purchased Electricity		Grid electricity supplied by the city mains network. The city could not provide detailed energy usage.
Other Fuel Related Emissions	Well to Tank emissions from the fuel used in the generators and rented / leased vehicles.	WTT from fuel use or vehicles owned by third parties and contractors. Transmissions and distribution losses from electricity used by the event, as electricity use data was not available.
Visitor Transport	Visitor travel emissions estimated based on two survey results, and the organiser estimates for visitor numbers.	Visitors hotel stays during the event.
Participant, Guests and Third Party Travel and Accommodation (including federation teams and athletes, UEC, UCI staff, etc)		Participating federation crew and cyclists travel to the event and accommodation during the event.
Staff Transport & Accommodation.	Staff and volunteers travel to and from the event site, and accommodation booked by the event.	
Volunteer travel & Accommodation	Volunteer travel to and from the event site, and accommodation booked by the event.	
Food, Beverage and Serveware	Food, beverages and serveware served during the event, either by event catering or food traders on site.	
Supplier and Freight Transport	Production, contractor and trader travel to and from the event site.	Wider sponsor vehicles, catering vehicles.
Purchased Materials, Supplies or	New materials and items purchased for the event delivery.	Hired materials, or materials purchased

Production Items		by third parties, traders or contractors.
Solid Waste and Recycling	Waste generated at the start, finishing and VIP section of the event, over the duration of the event	
Water Use and Wastewater		Water used and wastewater generated by the event, due to lack of data.

V. Emission Sources and Activity Data

Emission Source	Activity data Type Used	Emissions Factor Source	Assumptions
Stationary Combustion	Litre or kg of fuel purchased	UK DESNZ	No assumptions required.
Mobile Combustion	Litres of fuel used Km travelled by vehicle type.	UK DESNZ	No assumptions required.
Refrigerants	N/A	N/A	N/A
Purchased Electricity	No Data		No Data
Other Fuel Related Emissions	Litres of generator and vehicle fuel used.	UK DESNZ	Based on fuel use data for generators, plant machinery, and propane.
Visitor Transport	Average reported distance travelled (km) and reported method of transport used.	UK DESNZ	Scelta Data used for Limburg-based visitors and visitor journeys attending multiple days. BOP survey used for visitor travel to Limburg. BOP survey: 1020 responses. Were only used those which included a response for the average distance travelled and for the method of travel used. 362 responses were excluded, primarily respondents from Limburg. The average reported distance per method of travel was used to determine travel emissions.
Participant, Guests and Third Party Travel and Accommodation (including federation teams and athletes, UEC, UCI staff, etc)	No Data		No Data

Staff Transport & Accommodation.	Number of hotel nights Average distance travelled Mode of transport used	UK DESNZ	Staff survey: 8 responses out of 35 staff. Travel information over 10 months leading up to the event. The average distance travelled by the 8 staff was extrapolated to the 35 total staff (7,877km per staff) The reported breakdown of distances travelled per mode of transport by the 8 staff was then extrapolated based on the total estimated distances travelled by the 35 staff: (55% of all kms travelled were by diesel car 4% were by petrol car 28% were by electric car 1% were by hybrid car 12% were by train.
Volunteer Transport & accommodation	Number of hotel nights Average distance travelled Mode of transport used	UK DESNZ	178 responses were collected from the volunteer survey, which included data on the method of transport most frequently used, the average distance travelled per day, and the number of days worked. The breakdown of travel methods, and average distances travelled over the multiple days per method of travel, worked were then extrapolated to the 500 total volunteers.

Food, Beverage and Serveware	Type of dish Number of dishes sold Average weight per dish sold Litres of beverage sold	ADEME Agribalyse	Bevers and Bevers: total drinks sales and Litres were recorded. Total sales per dish were provided, weights per dish were estimated by AGF: 300g for burgers and noodles, and 200g for sides such as fritters, croquettes, etc. Panama Events: reported 1777 streetfood sales (primarily tacos, wraps and pizzas) with one third of sales consisting of the vegetarian options. An average emission factor for white meat/ fish dish, and vegetarian dish was used. For the 596 dinner menu sales, an average factor for a meal containing white meat /fish was used. Umami: An emissions factor per type of dish (sandwich, soup, etc) was used, based on the proposed number of units to be made. Taken from the "Cateringvoorzieninginen EK Wielrennen op de weg Limburg" document.
Supplier and Freight Transport	Type of vehicle used Distance travelled per vehicle	UK DESNZ	Data provided by 4 main suppliers and delivery contractors, with the recorded distance per trip and vehicle type used.
Purchased Materials, Supplies or Production Items	Types of materials purchased Raw materials of purchased items. Number of items purchased. Weight of items purchased. Purchase value of the materials	UK DESNZ ICE Database ONS GHG Intensity Factor	When data on weight or raw material was not available, a per spend approach has been used to estimate the emissions resulting from the manufacturing of these materials.

Solid Waste and Recycling	Total tonnes per waste stream Waste disposal process per waste stream.	UK DESNZ	No assumptions required.
Water Use and Wastewater	No Data		No Data

AGF

AGREENERFUTURE

WWW.AGREENERFUTURE.COM