

motor sport UK

CARBON CALCULATOR

GUIDE FOR CLUBS & EVENT ORGANISERS

1. WHAT IS THE CARBON CALCULATOR?

The Motorsport UK Carbon Calculator is a simple tool that helps clubs understand the environmental impact of their events. It estimates emissions from competitors, teams, officials, spectators, vehicles, logistics, and venue activity to give a clear picture of your event footprint. It works across all motorsport disciplines, from karting to trials, racing, and rally, so some questions may not apply to your event. If a section isn't relevant, simply enter "0".

2. WHY DID WE CREATE IT?

The calculator was developed to help clubs measure and understand their emissions in a consistent way. As climate change intensifies, it is essential for motorsport to know where emissions come from and identify realistic ways to reduce them. Each discipline has different emissions hotspots, so recognising these differences is important for creating effective reduction strategies. The tool shows clubs what contributes most to their footprint, highlights opportunities to reduce impact, tracks progress year on year, and provides transparent data to Motorsport UK or local authorities, such as through the Sustainable Rally Charter. The data submitted also helps Motorsport UK build a more accurate and up to date baseline for the sport and develop a clearer understanding of emissions across motorsport.

3. WHY DID WE CREATE IT?

Using the calculator is useful because it helps clubs demonstrate good governance and strengthen their applications with venues. It provides evidence for grants, sponsorships, and local authority approvals, and supports informed decisions about travel, logistics, and operations. It also helps clubs communicate their sustainability work to members and benchmark their performance against other clubs while tracking improvements over time.

4. COLLECTING YOUR DATA

Different clubs gather information in different ways, so use the method that works best for your event. The most common approach is sending out the Travel Survey in final instructions, via Sportity, or within competitor information packs.
A travel survey template can be found here:
https://www.motorsportuk.org/about-us/environmental-sustainability/environmental-resources/

Other useful methods include adding questions into operational roles, speaking directly to teams in the paddock, gathering information from venue staff, using sign on data, or observing a sample of competitors to estimate idling time or travel per lap.

There is no single correct method, what matters most is being consistent year on year so results can be compared over time.

5. WHAT ARE READY RECKONERS?

When you select your discipline, the calculator automatically fills in typical values (shown in grey). These Ready Reckoners are averages taken from real motorsport events. If you don't know a specific figure, you can leave the Ready Reckoner in place. Perfection isn't required; the aim is to be as accurate as reasonably possible.

6. UNDERSTANDING THE CARBON CALCULATOR

A. COMPETITION DATA

You'll need the event duration (from start to finish, excluding breaks), which the organiser or timekeeper can provide. You will also need the total number of registered competitors (the organiser's records will show this). Competitive distance and practice distance is the average distance per competitor. This can be estimated knowing the distance of the competition route and how many laps/runs were completed per competitor or if your event has a timekeeper. If your event does not include practice, simply enter zero.

Vehicle idling time requires you to watch a few competitors at the start line and take an average of how long their engines run before starting the competition.

Other mileage includes anything not part of the competitive run, such as liaison sections in rally which the organiser will have planned before the event.

Fuel related information such as how many petrol, diesel, EV, and sustainable fuel vehicles you have, plus typical consumption can be collected through the travel survey, or by asking competitors directly if needed. Sustainable fuel emissions savings can be taken from survey responses or left as 0 if not known. Tyre information (type, weight, and the number used per competitor) can be collected via the survey, by speaking to competitors, or by checking regulations or manufacturers' websites.

B. LOGISTICS & SUPPORT (TEAMS)

For competition vehicles and team travel, use the travel survey to gather the average number of people per team, their travel distance, the types of vehicles they use, and whether they tow trailers or use rigid/articulated vehicles. If you know where the teams are based, you can work out an average from this. If teams use support generators, you can ask them directly or include the question in the survey. Please note, this is an average use of generators per team, not a total.

C. OFFICIALS & MARSHALS

The event organiser will know the total number of officials and marshals attending. The average travel distance, vehicle type, and car sharing can come from the travel survey. If your sample is too small to work out the amount using petrol, diesel or EV vehicles, you can use the Ready Reckoners which is based on government averages.

D. SPECTATORS

Estimate the number of spectators using ticket counts, gate estimates, or visual assessment. If this is not possible, please use the Ready Reckner's. The average travel distance, transport mode (car, train, coach, on foot), and the number of passengers per car are best gathered through the travel survey, or by speaking with a sample of spectators at the event if required.

6. UNDERSTANDING THE CARBON CALCULATOR

E. VENUE DATA

Venue related information typically comes directly from venue staff. This usually includes details such as the floor area of buildings, which can also be estimated using Google Maps if needed. If you are only using part of a building, make sure you divide the total floor area, so you are only counting the space actually used for your event. The venue should also be able to confirm the percentage of renewable electricity they use and the number of temporary generators on site. Please note that this figure should be the total number of generators, not an average.

For display or exhibition vehicles, you can either ask the venue for numbers or count them yourself. Their travel distances can then be estimated using responses from the Travel Survey or asking them directly. It is important to include only vehicles that are essential for the sport to take place. For example, if a venue chooses to bring in attractions such as dodgems to draw more spectators, those emissions belong to the venue, not the event, because they are not required for the sport itself.

Medical, emergency, or auxiliary vehicle numbers can be confirmed with the medical or organising team, ideally at a quieter moment, such as later in the day when they are not busy. This may include safety and delegate cars, rescue and recovery vehicles and ambulances etc. Their travel distances can also be estimated using average figures from survey responses.

WHAT HAPPENS ONCE I HAVE COMPLETED THE CALCULATOR?

Once you press the Submit button, your data is sent directly to Motorsport UK. If you need to make any additional edits after submitting, you will need to contact Motorsport UK. Motorsport UK will use the submitted information anonymously to update the sport's overall emissions baseline and to analyse motorsport's carbon footprint. This analysis helps inform education, supports the development of effective reduction strategies, and contributes to long term sustainability planning across all disciplines. The data is also shared anonymously with relevant committees so they can make informed, evidence based decisions that reflect the realities of each discipline.

We would like to thank everyone who has engaged with the tool so far, your input is essential in helping the sport understand its impact and work towards meaningful reductions.

IF YOU NEED ANY HELP USING THE CALCULATOR, YOU CAN CONTACT MOTORSPORT UK'S SUSTAINABILITY TEAM FOR GUIDANCE AT: SUSTAINABILITY@MOTORSPORTUK.ORG