



GREENPOWER

GREENPOWER EDUCATIONAL TRUST

NEWSLETTER

Summer 2024



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Chief's Chat

by Barnabas Shelbourne, CEO



Firstly, a big congratulations for all the winners this year at the finals at Goodwood. Also, a big shout out to the teams that managed to get to the international finals, and all the teams that managed to get their cars to an event. It is such massive achievement, and hopefully we'll welcome lots of new teams next year.

I'm 13 months into the role and in that time, I've travelled all around the UK and met many new people who are invested in the Greenpower programme. I've also met a whole load of amazing young people. Thank you everyone for all your support and encouragement.

This season we've engaged with 413 organisations, we've had 618 cars register for events, we had 1220 entries, this is an increase on all points compared to 2023 and we are working our way back to 2019 levels.

Recently we had a team session to look at our strategic objectives for the next year. We did a little Ice Breaker, and one of the questions during the activity to me, was, "Why am I here?". It made me reflect on what we do and why we do it. My response was that the thing that drives me is purpose, and I see Greenpower as providing opportunity for young people, and a level playing field. It provides an opportunity for a whole load of things. So why am I here? It is to help Greenpower reach more young people because it offers life changing opportunities, the result being that the next scientists, engineers, inventors, and many other innovative young people will find their purpose, which could potentially lead to them discovering ways to help society and the environment.

Over 25 years, 10s of thousands of young people have taken part and gone onto to achieve many things, but we can do more. I've said it a lot during this year, that we are only scratching the surface with the number of young people who currently have the chance to be involved in the programme each year. Did you know that there are around 27,000 schools in the UK, in addition to this there are thousands of youth organisations working with thousands of young people each year. Imagine each school and youth organisation had a Greenpower team!

So, as we go forward into 2025 we will be looking for more ways to reach more young people, and enable more organisations to take part in Greenpower. However, it will take a great deal of collaboration and support to be able to do that. One of the key things is to bring on board more people to support what Greenpower does.

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This year we have been extremely fortunate to have support and sponsorship from Ford, TAQA, Lockheed Martin, Mirus, Renishaw, Dudgeon Fund, Perkins, Cubico, James Dyson Foundation, Hull City Council, KMF, Cummins, BBL Batteries, Vector, and others. This has enabled us to do more. We have also been fortunate to have legal support from Hogen Lovells, and media support from Spacesuite Media. In addition to this we have had business support from Ad-esse. We have also had input and support from Goodwood, Motorsport UK, the Royal Navy, Lotus, Fully Charged, Stem Learning and our suppliers who've helped us, and work with us to provide all the parts and kit to enable the kit cars to operate. All these organisations have provided some element of support which have enabled us to deliver. As well as financial and other support, we cannot do what we do without the amazing individuals who come and volunteer with the

various tasks that happen around the UK, and get involved in other elements of Greenpower. We are very grateful and thankful. Finally, we are very thankful for the organisations that have taken on the Greenpower programme, and use it to enable the young people they work with to have access to exciting life opportunities in addition to their more formal educational experiences. There are many others who help Greenpower each year, and this year, in addition to our team, and Trustees. Greenpower cannot do what it does without the amazing, committed community. We are thankful to you. But...there is so much more to do. Please help us next year to do even more together. So, I'll finish with a call to action, if you know anyone that would like to get involved and support Greenpower, please do get in touch.

Best wishes
Barnabas

National supporter



Media, Legal and Consulting supporters



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Regional supporters



Opportunities

We are continuing to recruit new team members to support with different roles

- Clerk
- Chief Scrutineer
- Timing
- Recovery

We will be arranging training over the next few months, and so if you're interested in taking part in the training and learning more about any of these roles, please contact David@greenpower.co.uk

Supporter showcase

With Naheed Akhtar-Saddique,
Ford PD Business Operations & Greenpower Partnership Lead



Why are Ford involved in Greenpower?

Driven by a shared vision to inspire and empower the next generation of engineers, innovators, sustainability leaders ensuring under represented groups benefit. All Enabling the nurturing of STEM talent, Driving innovation, Promoting sustainability and building communities.

How long have you been supporting?

Ford Britain has been a proud supporter of the Greenpower Educational Trust and 2025 will be our 20th year of support.

Why is it important to support initiatives like Greenpower?

To do the right thing, but to also ensure future generations have the right hard and soft skills for employment.

What would you say to other organisations thinking about supporting the Greenpower programme?

To give back and grow. It is an amazing long-standing initiative, always evolving to stay relevant and current, a perfect opportunity for organisations to Drive positive change, Address the skills gap and inspire a love for learning.





Greenpower Tech Clinic



Reminder...

Please do reach out to us if you need any support or have any questions. Greenpower has a group of Volunteers who are Greenpower Ambassadors, who are located around the UK.

Some Ambassadors also run their own programmes, and are a part of organisations who are our Centres of Excellence and go the extra mile, in addition to running their own Greenpower programmes, they help other organisations too. They are quite happy to support locally or help with linking up new participating organisations with more established ones to help teams get started. Here is the link to our webpage with which includes a map of Ambassadors around the UK [Volunteering | Greenpower](#) .

If you are new to Greenpower and haven't discovered the Facebook group for team leaders, then please just search Greenpower Community, and you can apply to be part of the community. It is a community page full of team leaders who can offer guidance and support, unfortunately this group is not open to young people under 18 and still in school.

Click here to visit the interactive Greenpower Ambassador map and find out the contact for your area



GOODWOOD FESTIVAL OF SPEED - STEM SEMINARS

We have been working with Goodwood for many years, and are fortunate to have been able to have stands at Festival of Speed, and Goodwood Revival. The Festival of Speed is such an exciting and inspiring event.

Each year the Goodwood Education Trust and Goodwood Festival of Speed arrange STEM Seminars and activities for schools who can sign up to visit the Festival of Speed, and be inspired. They are particularly interested in trying to provide more opportunities for organisations and schools who work with young people who may not necessarily have the chance to take part in things like the Festival of Speed.

If you would like to find out more information about signing up and attending with your young people in 2025, please email Anne at get@goodwood.com . Goodwood Education Trust also have resources available to support with the logistics of getting groups to the Festival of Speed from far afield.



Next Season

We know that you are all now working hard on your Greenpower cars ahead of the 2025 season. We also know that you are all super keen to know when the dates will be released for 2025. We completely understand the challenges with arranging and transporting your groups, and the paperwork that needs to be completed to be able to take a group from school or the youth club to a Greenpower heat. Every year we begin planning the following season to try and get everything in place as soon as possible, and this year we started in the summer and have been doing well, but we expect to release the dates before the Christmas period. Unfortunately we have to wait for the venues to confirm the dates, and we then need to juggle everything around to be able to fit everything in, to deliver all the events.

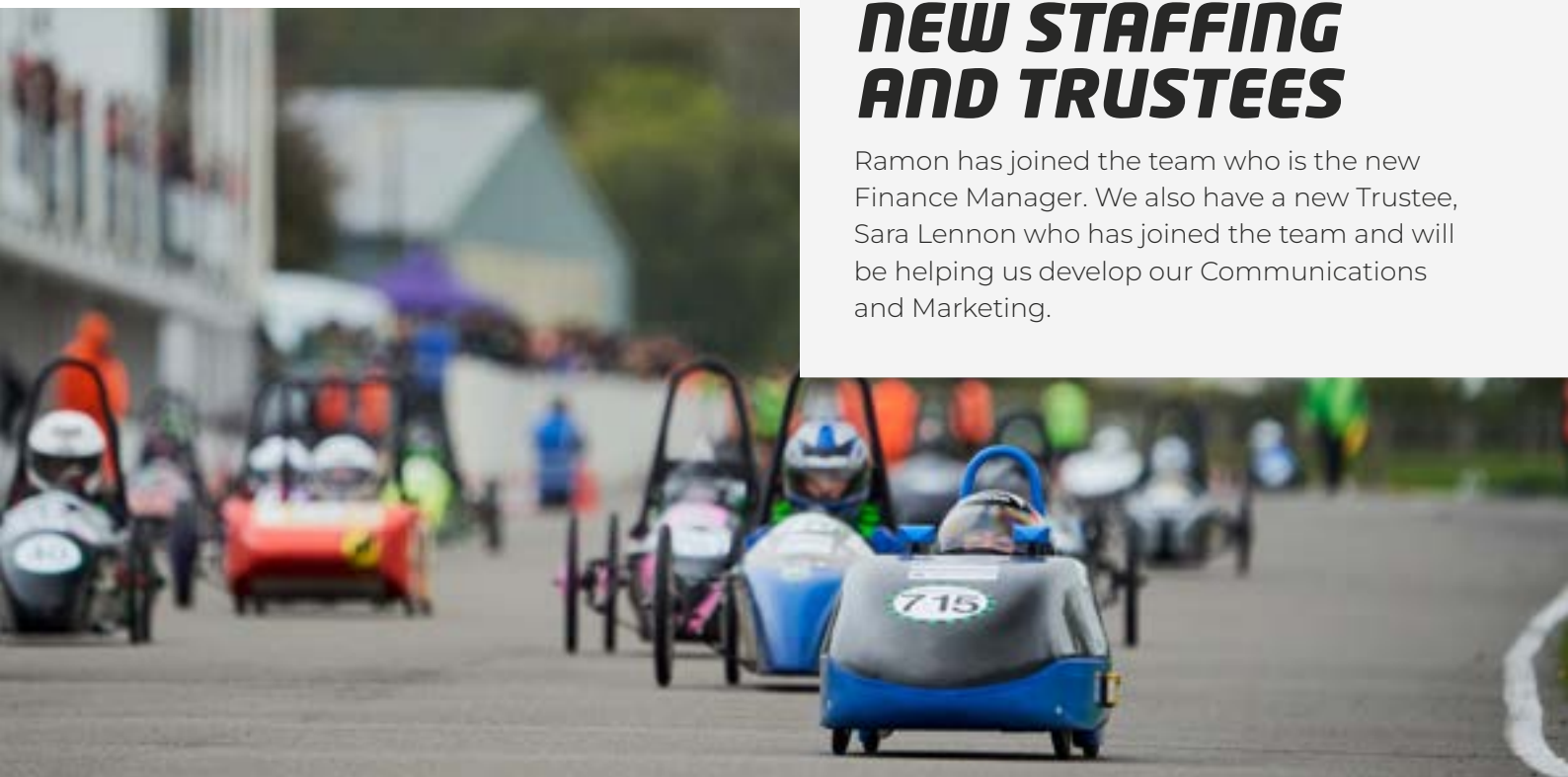
Our Technical Committee has also been meeting to review the regulations to ensure that they are fit for purpose, clear, and provide a framework for the safety of all young people. We aim to release the updated regulations as soon as possible.

We are making a change to the website so that team leaders will be able to register their team members through our race event registration portal, which will hopefully reduce administration on the day of events.

We are also going to be introducing a membership for young people to sign up to each year. We are aiming to get started and then develop, providing opportunities to members as they arise.

NEW STAFFING AND TRUSTEES

Ramon has joined the team who is the new Finance Manager. We also have a new Trustee, Sara Lennon who has joined the team and will be helping us develop our Communications and Marketing.





Motorsport Careers

Greenpower are building a foundation for future Motorsport careers

For most of us aspiring engineers, the F1 scene represents the pinnacle of motorsport careers, and arguably, an insurmountable challenge to get there.

But, getting into a Motorsport career is possible with hard work, so do you get the journey started?

Enter Greenpower Education Trust, an organisation that offers young enthusiasts a taste of the motorsport world through hands-on experience in electric car design, construction, and naturally, racing.

Greenpower's programs, ranging from the Goblin category for primary schools to F24 and F24+ for older students, provide a unique platform for developing skills that are directly applicable to careers in Formula 1 and other motorsport disciplines.

If you're wondering how a Greenpower project can lay the groundwork for a future for your Motorsport career, read on...

DRIVER61 Scott Mansell

We recently had the opportunity to catch up with Scott Mansell who kindly has shared his experience and advice for anyone thinking about getting involved with the Greenpower programme - [Driver61.com](https://www.driver61.com). Big thanks to Scott for taking the time out to give some feedback ([See pages 8-10](#)).



Video – How to Get a Job in Motorsport



Technical Skills Development

With Scott Mansell



Greenpower projects offer a unique and valuable stepping stone for those aspiring to careers in Formula 1 and other forms of motorsport. While F1 technology is undoubtedly more advanced, the fundamental principles, problem-solving skills, and teamwork developed through Greenpower create a solid foundation. It all adds up to create the perfect CV ready for an Internship or graduate role in Motorsport.

For young enthusiasts looking to turn their passion for motorsport into a career, Greenpower provides an accessible entry point. It offers a taste of the challenges and excitement that define the world of motorsport, while building a skill set that is highly valued in the industry.

Remember, many of today's F1 engineers and team members started their journeys with projects similar to Greenpower. With dedication, continuous learning, and the practical experience gained through programs like Greenpower, you too could find yourself in that F1 pit lane, not just as a spectator, but as a vital part of the team.

Drivetrain Engineering

Greenpower projects introduce participants to the fundamentals of electric powertrains. Students work with motors, electronic speed controllers, inverters and batteries, gaining hands-on experience with high power delivery systems.

Whether your heart is set on going racing, we all know how important hybrid and EV technology is in Automotive engineering. Whatever your future holds, this knowledge forms the basis for understanding the complex hybrid powertrains used in modern F1 cars.

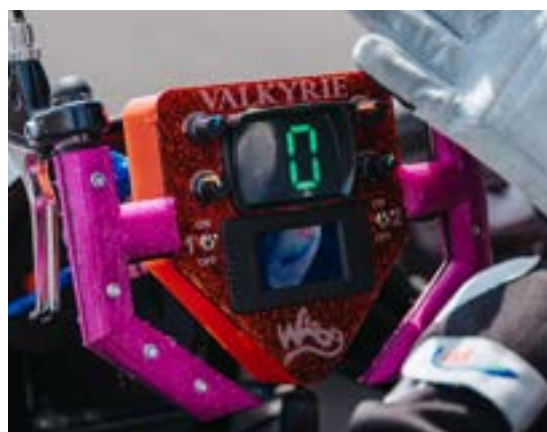
For example, in the F24 category, teams experiment with motor and gear ratios to optimize their car's performance for different tracks. This process mirrors the work done by F1 powertrain engineers who fine-tune energy deployment strategies for each Grand Prix circuit.



Electronics and Control Systems

Participants in Greenpower, particularly in the F24 and F24+ categories, work with high voltage electronic systems and controllers. They learn to design and assemble motors, batteries, and switch gear, and some teams even develop custom control systems using Arduino or Raspberry Pi.

This experience provides a foundation for understanding the sophisticated electronics and programming languages used in F1 cars. While F1 systems are far more complex, the principles of sensor integration, data acquisition, and control logic remain the same.



Software and Data Analysis

Performance analysis plays a crucial role in every discipline of modern motorsport. Greenpower teams use data logging systems to record and analyse their car's performance. They learn to interpret logged data to make informed decisions about energy management, car setup and driver feedback.

This data-driven approach is fundamental in all flavours of motorsport, where professional teams analyse terabytes of data from hundreds of sensors on each car. The skills developed in Greenpower projects - understanding data trends, making performance predictions, and optimizing strategies based on data - are directly applicable to roles in F1 race engineering and strategy teams.



Aerodynamics and Vehicle Dynamics

While Greenpower cars operate at lower speeds than F1 vehicles, aerodynamics still plays a critical role in their performance. Teams design bodywork to reduce drag and, in some cases, generate downforce. This introduces students to concepts of fluid dynamics and the balance between straight-line speed and cornering performance.

The basic principles learned through Greenpower provide a starting point for understanding the complex world of F1 aerodynamics, including concepts like ground effect and active aero systems.



Project Management and Team Roles

Greenpower projects mirror the structure of professional motorsport teams, offering participants experience in various roles:

- 1. Design and Engineering:** Teams conceptualise and refine their car designs, considering factors like weight distribution, aerodynamics, and energy efficiency.
- 2. Manufacturing and Assembly:** Students build their cars, learning about materials, fabrication techniques, and the importance of precision in assembly.
- 3. Race Strategy:** Teams develop and execute race strategies, focusing on energy management and optimizing performance over the duration of an event.
- 4. Data Analysis:** Participants interpret telemetry data to identify areas for improvement and inform future design decisions.

This multifaceted approach reflects the collaborative nature of F1 teams, where success depends on the seamless integration of various specialised departments.



Practical Experience

One of the most valuable aspects of Greenpower is the hands-on experience it provides for students. Participants don't just learn theory; they apply their knowledge in real-world scenarios. They build cars, troubleshoot problems, and make quick decisions during race events.

This practical experience is invaluable for future careers in Motorsport. Employers in the motorsport industry often look for candidates who can demonstrate not just theoretical knowledge, but also the ability to apply that knowledge in high-pressure situations.



Industry Exposure

Greenpower events offer more than just racing; they provide networking opportunities with industry professionals, sponsors, and other teams. Many events feature guest speakers from the motorsport industry, giving participants insights into potential career paths.

Moreover, Greenpower projects familiarise students with motorsport regulations, safety protocols, and industry standards. This knowledge is crucial for anyone aspiring to work in the highly regulated world of Formula 1.



Skill Alignment with Formula 1 Roles

The skills developed through Greenpower align closely with various roles in Formula 1:

- Engineering positions benefit from the technical knowledge gained in areas like drivetrain design, aerodynamics, and vehicle dynamics.
- Data analyst and strategist roles utilise the experience in interpreting performance data and developing race strategies.
- Operations and logistics positions build on the project management and teamwork skills developed through organising and participating in Greenpower events.



Career Progression

Participation in Greenpower can influence educational choices, leading students toward relevant degree programs like mechanical or electrical engineering. Experience like this looks great on your CV, too. This combination of academic background and practical experience from Greenpower projects can make candidates stand out when applying for internships or entry-level positions in motorsport.

Many F1 teams run placement schemes for students and graduates. The hands-on experience gained through Greenpower can make applicants more competitive for these highly sought-after opportunities.

The road to a career in Formula 1 is challenging, but with the right foundation, it's a journey well within reach. If you're keen to learn more, here's where to get started with Greenpower:
greenpower.co.uk/greenpower-categories

THANKS FOR READING



GREENPOWER

CONTACT US

Give us a call for more information
or drop us an email:

01243 552305

info@greenpower.co.uk

greenpower.co.uk

**The Greenpower Centre
Arundel Road
Fontwell
West Sussex
BN18 OSD**

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