



Greenpower Education Trust  
**GRAMPIAN  
PROGRAMME 2018**  
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Global Partner



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Official Tools Provider

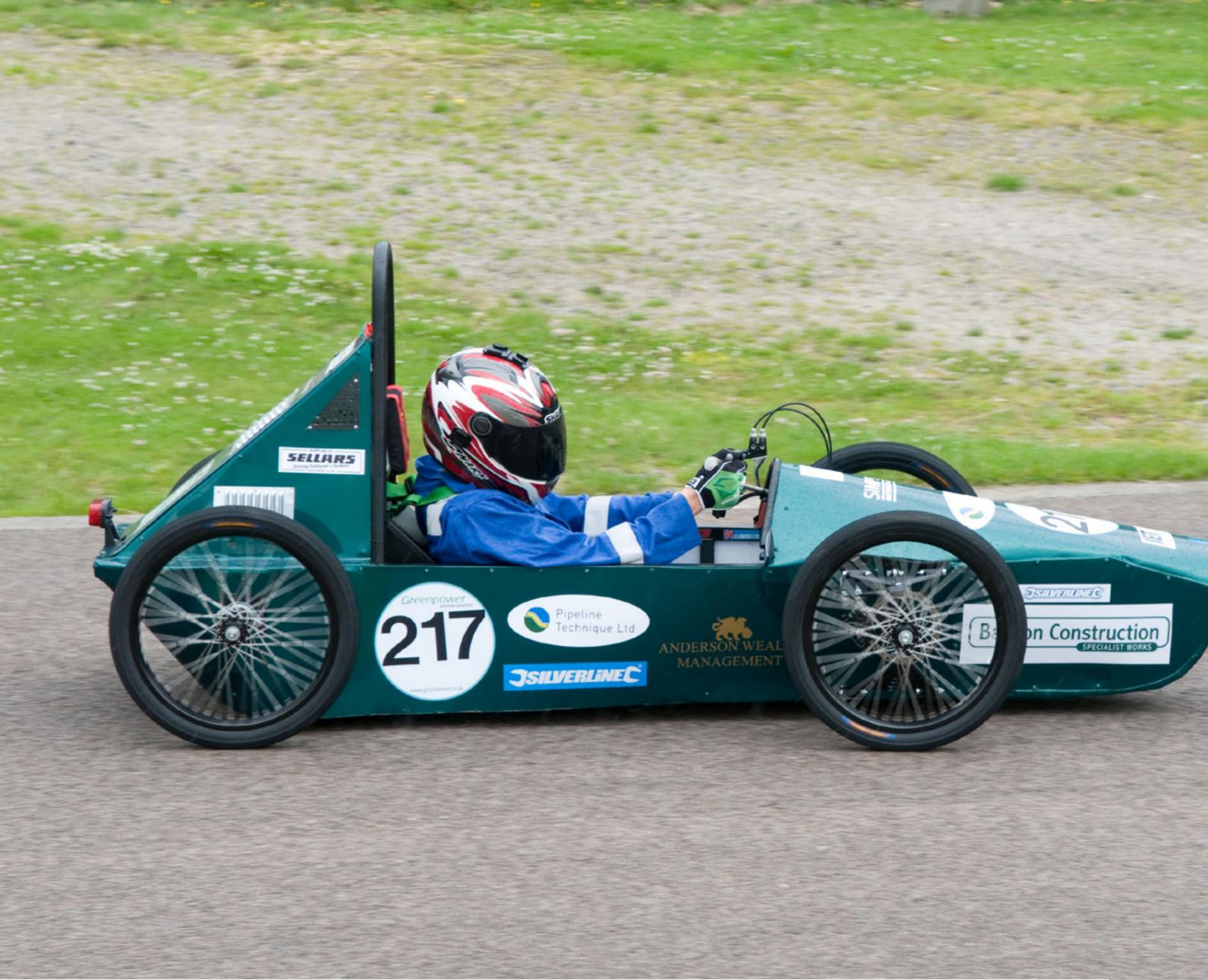


Global Technology Partner



Event Sponsor





# WELCOME

## Grampian Transport Museum Event 2018

Welcome to our annual IET Formula Goblin and IET Formula 24 event at Grampian Transport Museum.

We're pleased to be returning to this fantastic venue again in 2018 for our annual two day event at the Museum. As a charity, Greenpower relies on significant support from many hundreds of volunteers, organisations and supporters who contribute unbelievable amounts of their time and resources.

This is all because we share the same vision of inspiring our young participants about engineering subjects and sustainability. TAQA are one of the many companies that share our vision. We would like to thank them for their continued support that allows us to run this event, year after year.

Good luck to all of the teams that will be participating; we're looking forward to seeing you all over the two day event!

Event supported by  
TAQA



# INTRODUCING GREENPOWER

At Greenpower Education Trust we give young people an exciting, real life challenge with a proven track record in sparking an interest in engineering. The challenge – to design, build and race an electric car, harnesses the excitement of motorsport to inspire young people to excel in Science, Technology, Engineering and Maths (STEM) studies.

- We work with over 600 schools throughout the UK and run 35 regional events and an International Final every year.
- More than 10,000 students take part each year, from primary school through to university. Greenpower is helping to address the skills gap the UK faces in engineering and is licensed in various countries worldwide, highlighting to participants the global nature of the industry.

*“The organisation was first rate, the staff were all very approachable and helpful and the atmosphere was very good indeed. It was, in fact, inspirational without being restrictive.”* Paul March, Poole Grammar School

## IET Formula Goblin Ages 9 – 11

The IET Formula Goblin is an electric kit car designed for young people to build and race at venues such as Goodwood. A typical build takes 15 hours and the Goblin can be dismantled and rebuilt each year with a new team of children.

The Goblin Kit Car is aimed at 9 to 11 year-olds and is ideal for schools and community groups. The kit comes with easy to follow instructions and the build requires only simple hand tools. Schools can run the project as part of the design and technology or science curriculum. Teams design and create their own bodywork once the kit is assembled. School teams are invited to participate in Greenpower events held throughout the UK.

*“We have enjoyed building the car this year and it was great to compete against other schools’ cars in Washington. As result of the project we now know more about engineering, working together as a team, listening to others and sharing ideas.”* Goblin Team Members, Cleadon Academy, Sunderland



## IET Formula 24 Ages 11-16

IET Formula 24 gives 11 – 16 year-olds the opportunity to design, build and race an electric car on some of the UK’s top motor circuits. Teams of students design and build their own IET Formula 24 Kit Car and compete at regional events and the International Final held at Rockingham Motor Speedway. IET Formula 24 is geared towards schools but we welcome private entries and teams from youth groups and engineering clubs.

*“It was such a fantastic event for the pupils to take part in and something that made me immensely proud as a teacher.”* Alan Tilley, Southbrook Special School, Devon



## IET Formula 24+ Ages 16 – 25

Greenpower boosts interest and career opportunities in Science, Technology and Engineering by enabling 16 – 25 year olds to design, build and race an electric IET Formula 24+ Kit Car. Teams take part in the design and building of the car, race days and the IET Formula 24+ Championship. IET Formula 24+ is aimed at sixth forms, colleges, universities and apprenticeship schemes but we also welcome private entries and teams from youth groups and engineering clubs.

*“Having my involvement in Greenpower on my CV when I applied for university and placements really helped me stand out. The contacts I made at Greenpower also helped me to arrange my work placement during my degree”* Nikki Jones, IET Formula 24+ participant



# Long-term Vision.



TAQA is committed to a safe and successful future in the UK North Sea.

We are once again proud sponsors of the Grampian heat of the national Greenpower competition.

TAQA recognises that the future of the oil and gas industry relies on a skilled workforce, so it's important that, from a young age, children get a better understanding of how subjects such as technology and engineering might be applied in 'real life'.

Many of our employees volunteer to help both prior to and during the regional event, sharing their valuable skills, knowledge and time with the young people involved, as they undertake a year-long journey to design, build and then race their electric cars.

Best of luck to all those racing their cars over the weekend.



**We mean energy**

[www.taqaglobal.com](http://www.taqaglobal.com)

# EVENT TIMETABLE

IET Formula 24 Timetable – Friday 15 June

08:00 – Arrival

08:30 – Scrutineering opens

09:15 – Team briefing 1

09:30 - 11:00 – Practice

11:10 – Team briefing 2

11:30 - 13:00 – Race 1 (IET F24 Ages 11-16)

14:00 - 15:30 – Race 2 (IET F24 Ages 11-16)

16:00 - Prize giving

*Please treat this timetable as flexible, thank you.*

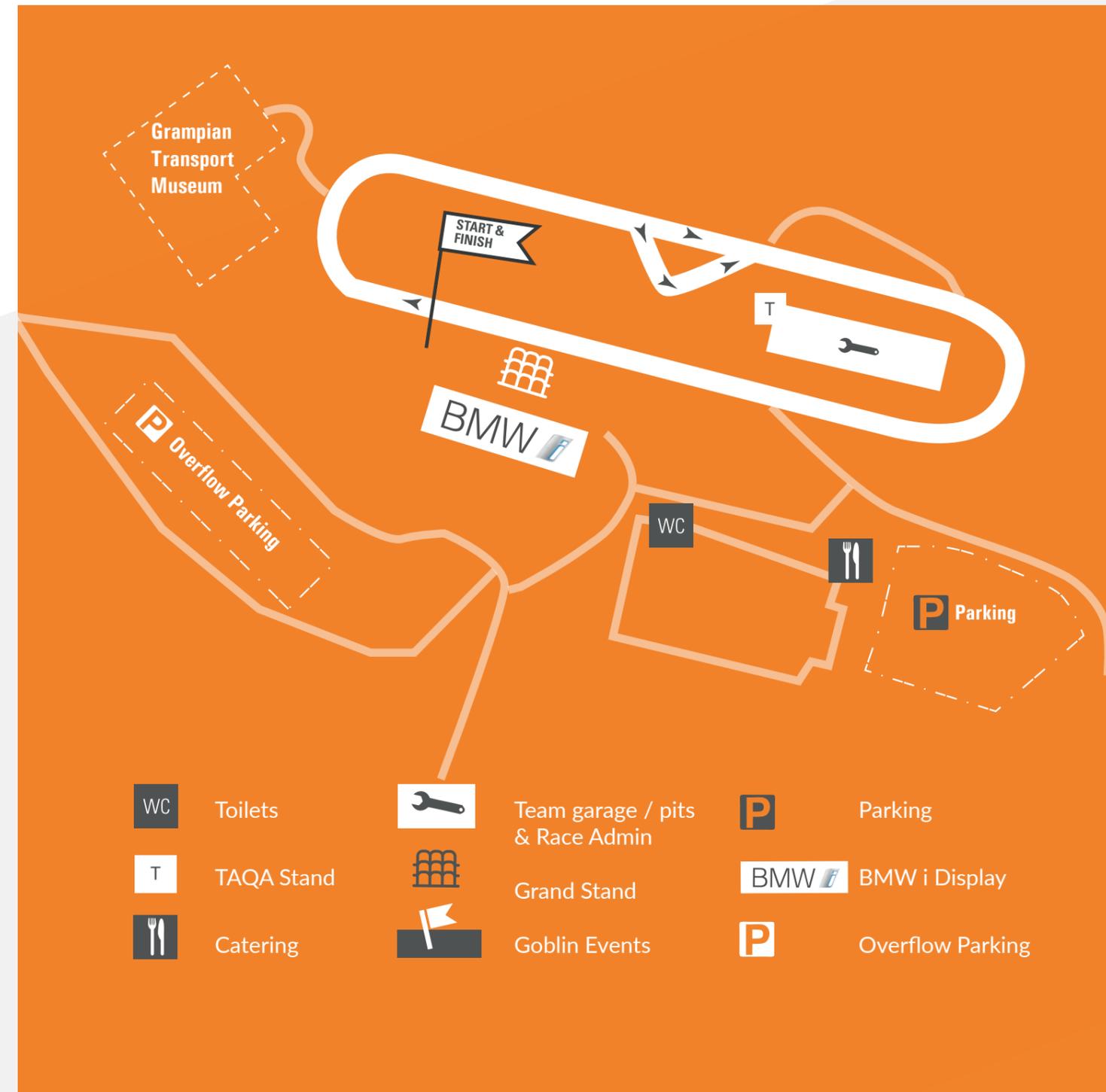


# IET F24 ENTRIES

No.	ORGANISATION	CAR NAME
114	Braeview Academy	Skullduggery
303	Beath High School	BeathBoys
299	Hazlehead Academy	Bumble
231	Police Scotland	Blue Performance
121	Albyn School	Green Arrow
222	West college Scotland	West College Scotland - Gold Slam
282	Banchory Academy	50 Shades of Green
	West College Scotland	West College Scotland - All Stars
265	Forres Academy	Forres 1
35	Grampian Transport Museum	GTM Bullet
25	Grampian Transport Museum	GTM Spyder
217	Meldrum Academy	Meldrum Missile

# THE CIRCUIT IET F24

## GRAMPIAN TRANSPORT MUSEUM





# IET F24 AWARDS

Race 1 - Winner  
Race 1 - Runner Up  
Race 1 - Third Place

Race 2 - Winner  
Race 2 - Runner Up  
Race 2 - Third Place

Kit Car - Winner  
Kit Car - Runner Up  
Kit Car - Third Place

# ADDITIONAL AWARDS

Best Presented Team  
Best Newcomer  
Portfolio Award  
Siemens Digital Award  
IET Engineering Award  
Spirit of Greenpower Award

To get the full guideline on the portfolio award please visit our website:  
<https://www.greenpower.co.uk/awards>

# #LIVE RESULTS

Follow us live and watch the event unfold from every angle!

RESULTS

Click the results button to see live results from the race or visit:  
<http://www.bbk-online.net/gpt/>

Follow social media updates throughout the day:



GreenpowerRacing



Greenpowertrust



Greenpowertrust



company/greenpower-education-trust





# IET FORMULA 24 INTERNATIONAL KIT CAR FINAL

FRIDAY 5 OCTOBER  
ROCKINGHAM MOTOR SPEEDWAY

No qualification required.  
To enter or visit:

<https://www.greenpower.co.uk/events/international-final-2018-day-1-friday>



# EVENT TIMETABLE

## IET Formula Goblin Timetable – Sat 16 June

08:30 Teams start to arrive

09:15 Scrutineering starts – the tallest driver will be required for scrutineering.

10:00 Team briefing – compulsory for all participants.

10:30 Goblin parade – all cars and participants must attend for supplementary award judging.

11:00 Events start – slalom and drag.

13:00 Lunch

13:30 Events recommence

15:00 Prize giving

*Please treat this timetable as flexible, thank you.*



# IET F GOBLIN ENTRIES

No.	ORGANISATION	CAR NAME
1	Cultercullen Science Club	Cultercullen Comet
2	Insch School	Insch School - Small but Speedy
3	Insch School	Insch School - Moove Over
4	Quarryhill	Quarryhill 1
5	Robert Gordon's College	Apollo RGC
6	Robert Gordon's College	Bullet Bob
7	Robert Gordon's College	Gordina
8	Rayne North school	Rayne North school
9	Dunecht School	Dunecht
10	Crathes Primary School	Rainbow Baguette
11	Kinneff Primary School	Flames of Fury
12	Marykirk Primary	Rainbow Rockets
13	Kittybrewster Primary School	Kitty Kart

# IET F GOBLIN ENTRIES

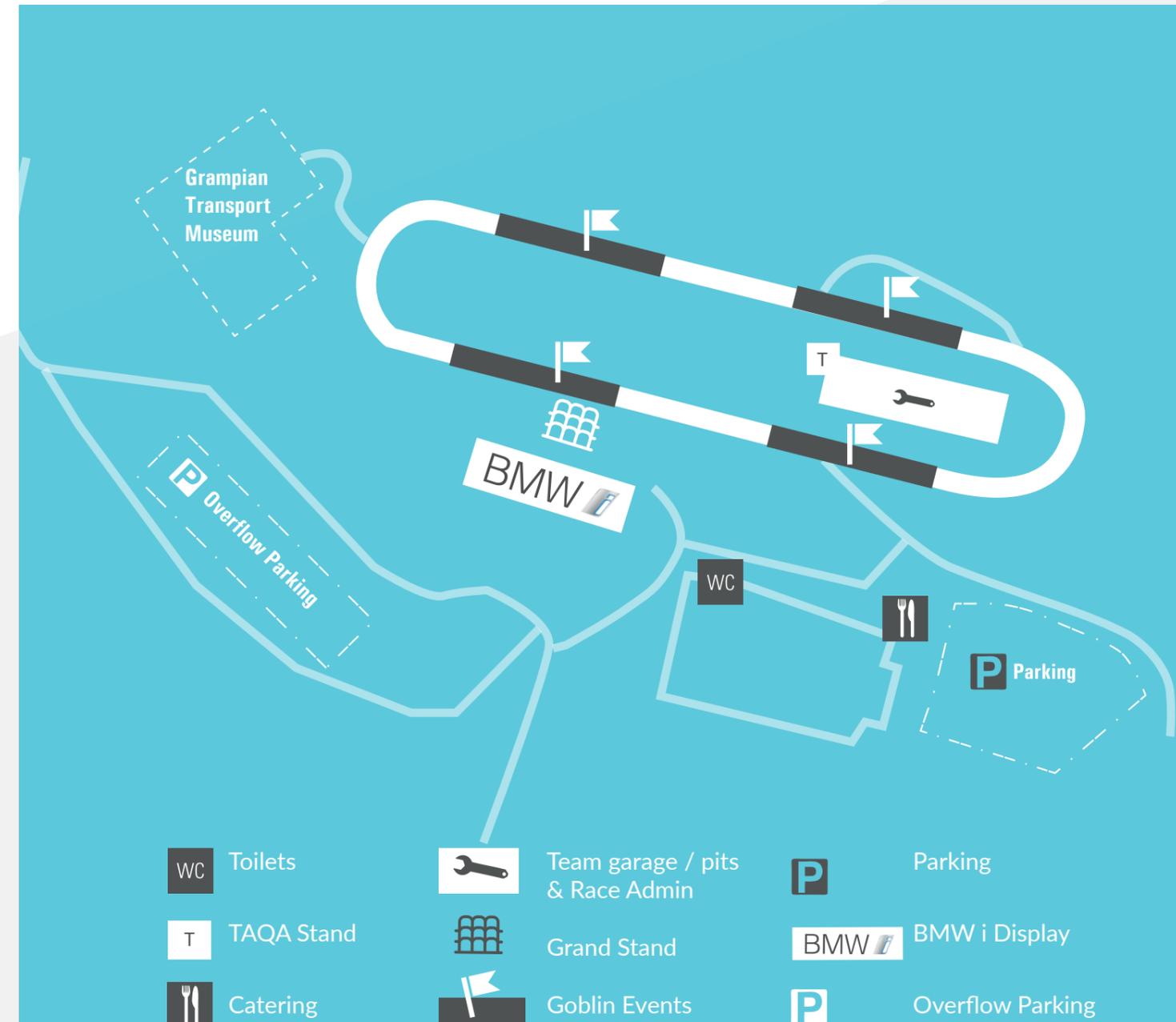
No.	ORGANISATION	CAR NAME
14	Craigievar Primary	The Rocket
15	Cairney School	The Raptor
16	Edderton/Gledfield Primaries	Soaring 7s
17	Kellands School	Karrot
18	Macduff Primary School	JAG 01
19	Woodside School	Woodside 2
20	Woodside School	Woodside 1
21	Chapel of Garioch School	Chapel Cheetah
22	Durness Primary School	Cookiemobile
23	Banff Primary	Banff Space Speeders
24	Aberdeen Science Centre	ASC
25	Lybster Primary School	14
26	Logie Durno School	Durno Dangers

# IET F GOBLIN ENTRIES

No.	ORGANISATION	CAR NAME
27	Miller Academy Primary	Hairy Hamish's Heroes
28	Kingswells School	Jump-er Start
29	Kingswells School	Green Marine Machine
30	Halkirk Primary	Halkirk Hippies
31	Airyhall	Car 2
32	Airyhall	Car 1
33	Newtonhill School	Newtonhill2
34	Newtonhill School	Newtonhill1
35	The Gordon Primary School	Gordon

# GOBLIN EVENTS MAP

## GRAMPIAN TRANSPORT MUSEUM



# IET F GOBLIN AWARDS

**The Slalom** – A single car hits the track using their driving skills to slalom through the gates and to enter the box at the end without hitting any cones. Winner, Runner up and Third place.

**The Drag Race** – An exhilarating rush allowing two cars race against each other in a straight line. Winner, Runner up and Third place

For the drag and the Slalom each individual car gets the chance to race six times. The fastest time within the six races decides the results.

**The Sprint Race** – Requires a track wide enough to fit at least three to four cars at once, as this is a head to head challenge and a knock heat event. Winner, Runner up and Third place.

**Overall Winner** – This is down to a point system and is tallied up over the events throughout the day. Extra rewards are given to teams taking part in the portfolio award.

## ADDITIONAL AWARDS

**Best Presented Team** – A well-coordinated team in both clothing and behaviour- they conduct themselves in a polite manner and are supportive and positive within their own team and towards other teams and attendees.

**Best Bodywork** – The bodywork is imaginative and has been designed and manufactured by the team. The team can talk to the judges about their bodywork with confidence and explain the choices they made.

**Greenest Bodywork** – The bodywork shows obvious use of recycled materials of any sort. A big effort has been made by the team to ensure the bodywork is as eco-friendly as possible. The team can talk about why they chose the materials and how they are “green”.

**Spirit of Greenpower** – This award differs at each event, but the team will stand out for a positive reason, it may be that they have been unfortunate during the race day but continued to be supportive of their team or that they assist another team with their cars.

**Portfolio Award** – The biggest additional awards, all submitted portfolios gain additional minus points. The portfolio should be a record of both the build and the design work – lots of bodywork designs could be included, photos of the build, any copies of sponsorship letters or any other work which has gone into the build. We like to see all of the work the team has done towards their car.

To get the full guideline on the portfolio award please visit our website:  
<https://www.greenpower.co.uk/awards>



# GATHERING OF GOBLINS

8 JULY 2018

2018 is seeing some changes to the IET Formula Goblin event calendar, spicing up the Gathering of Goblins with a venue change.

You will be hitting the famous TOP GEAR track at Dunsfold Park.

Could your team beat the STIG's lap record? Dare you to the challenge!

Don't miss out!! Register online: [www.greenpower.co.uk/events/gathering-goblins](http://www.greenpower.co.uk/events/gathering-goblins) to secure your team a place.





# INTERNATIONAL FINAL

FRIDAY 5 & SATURDAY 6 OCTOBER  
ROCKINGHAM MOTOR SPEEDWAY

Information can be found here:  
<https://www.greenpower.co.uk/events/international-final-2018-day-2-saturday>



# EVENTS 2018

IET F Goblins	10 March	HMS Excellent - Portsmouth, Hampshire
IET F24/24+	15 April	East Fortune B - Haddington, Scotland
IET F Goblins	18 April	Ford Airfield - Ford, West Sussex
IET F Goblins	21 April	Plumpton College - Plumpton, East Sussex
IET F24/24+	22 April	Dunsfold Park - Test Day - Cranleigh, Surrey
IET F Goblins	28 April	Renishaw New Mills - Wotton-Under-Edge, Gloucestershire
IET F Goblins	2 May	Rockingham Motor Speedway - Season Opener - Corby, Northamptonshire
IET F24/24+	12 May	Kirkistown Motor Racing Circuit - County Down, Northern Ireland
IET F Goblins	12 May	Kirkistown Motor Racing Circuit - County Down, Northern Ireland
IET F24/24+	19 May	Predannack Airfield Test - Lizard Peninsula, Cornwall
IET F Goblins	19 May	Luton Sixth Form College - Luton
IET F Goblins	2 June	Seaford College - Petworth, West Sussex
IET F Goblins	5 June	Scottow Enterprise Park - Norfolk
IET F24	6 June	KMF Malory Park (KMF cars only) - Kirkby, Mallory
IET F Goblins	9 June	Renishaw Miskin - South Wales
IET F24/24+	10 June	Goodwood Motor Circuit - Chichester, West Sussex
IET F24	15 June	Grampian Transport Museum - Alford, Aberdeenshire
IET F Goblins	16 June	Grampian Transport Museum - Alford, Aberdeenshire
IET F Goblins	20 June	Newquay Airfield - Newquay, Cornwall
IET F Goblins	20 June	Staffordshire Activity Centre - Seighford, Staffordshire
IET F24/24+	21 June	Predannack Airfield - Lizard Peninsula, Cornwall
IET F Goblins	26 June	Croft Circuit - Darlington, North Yorkshire
IET F24/24+	26 June	Croft Circuit - Darlington, North Yorkshire
IET F Goblins	30 June	Dunton Technical Centre - Basildon, Essex
IET F24	30 June	Dunton Technical Centre - Basildon, Essex
IET F24	3 July	Anglesey Circuit - Anglesey
IET F Goblins	3 July	Anglesey Circuit - Anglesey
IET F Goblins	5 July	Gateshead - Newcastle
IET F Goblins	8 July	Dunsfold Park - Gathering of Goblins - Cranleigh, Surrey
IET F24/24+	11 July	Rockingham Motor Speedway - Corby, Northamptonshire
IET F Goblins	11 July	Rockingham Motor Speedway - Corby, Northamptonshire
IET F Goblins	15 July	Humber Bridge - Hull
IET F24/24+	16 July	Humber Bridge - Hull
IET F24/24+	2 Sept	East Fortune - Haddington, East Lothian, Scotland
IET F24/24+	9 Sept	Dunsfold Park - Cranleigh, Surrey
IET F24/24+	16 Sept	Castle Combe Circuit - Chippenham, Wiltshire
IET F24/24+	19 Sept	Aintree Golf Centre - Liverpool, Merseyside
IET F24/24+	5 Oct	International Kit Car Final & Practice sessions - Rockingham Motor Speedway
IET F24/24+	6 Oct	International Final - Rockingham Motor Speedway - Corby, Northamptonshire





# IET FORMULA 24+ LAP RACE

FRIDAY 5 OCTOBER  
ROCKINGHAM MOTOR SPEEDWAY

A warm up race on the Friday before the Final round of the IET Formula 24+ championship. No qualification needed, the amount of laps are drawn from a hat on the day!

Enter here: <https://www.greenpower.co.uk/events/international-final-2018-day-1-friday>



# VOLUNTEERS NEEDED

We need Volunteers like you to help at Events!

We rely on over 600 volunteers each year to help us run our race events all over the UK. If you can spare a day of your time we'd love to have your help.

You don't need any experience or expertise as we have a briefing for volunteers at the beginning of each event so you know exactly what you're doing for the day.

Volunteering at Greenpower is lots of fun, and can be very varied. From helping at registration to scrutineering, there really is a job for everyone.

If you are a parent, teacher, friend, relative or spectator and interested in volunteering at a Greenpower event. Please get in touch as we would love to hear from you.

Lunch will be provided to volunteers at every event as a way of saying thank you for your support.

**We couldn't do it without you!**

For more information, please contact:  
E: [info@greenpower.co.uk](mailto:info@greenpower.co.uk)  
T: 01243 552305



*"Firstly I truly believe that the only way we are going to secure the next generation of engineers and scientists is by getting kids involved in activities that promote engineering, like Greenpower. Secondly it's fun! The team at Greenpower is always very welcoming and work hard to make every event a success, whatever the weather!"* Julian Bond – volunteered for 5 years

# FLAGS



## YELLOW FLAG

Indicates that there is a hazard ahead, e.g. stationary car/s or recovery vehicle. Be extra careful, slow down, and only overtake other cars if there is a significant speed differential. Drivers deemed to be overtaking dangerously under yellow flags will be penalised.



## RED FLAG

This means that the session is stopped until further notice. All drivers will slow immediately and continue slowly around the circuit until indicated to stop. Remain in the vehicle unless otherwise instructed.



## CHEQUERED FLAG

Each vehicle will finish the race when it first crosses the timing point after the race duration measured from the first time the union flag drops at the start of the race. As cars cross the start line after they have finished they will be presented with a static chequered flag. The winning car will be presented with a waved chequered flag.



## BLACK FLAG

A black flag pointed at your car indicates that you should enter the pitlane immediately, either for a Sin Bin penalty or because something is wrong with your car.



# WARNING!

**MOTORSPORT CAN BE DANGEROUS**

**Despite the organisers taking all reasonable precautions, unavoidable accidents can happen. Please comply with all instructions of marshals, notices and remain in permitted areas only.**

**They are concerned with your safety.**



# CENTRES OF EXCELLENCE

Would your school or centre like to be the local facility and hub where you can help support local Greenpower teams?

As a Greenpower Centre of Excellence you would be helping grow Greenpower and engage more young people through:

- Providing Solid Edge CAD software capability to local teams
- Supporting local teams with the design and build of their cars
- Encouraging more teams to get involved
- Providing a venue suitable to host conferences, build days and even race events

If you would like more information please contact:  
E: [info@greenpower.co.uk](mailto:info@greenpower.co.uk)  
T: 01243 552305

*Helping grow Greenpower and engage more young people*





# AMBASSADORS

We are currently searching for Ambassadors.

Greenpower STEM Ambassadors are volunteers who promote the project to schools in their area, support existing teams with technical or extra support for the build and helping them reach the target of hitting the race track.

Ambassadors are crucial to the sustainable growth of Greenpower and the service we provide to schools and young people throughout the country.

Your involvement can be entirely dependent on the time you are able to commit to the project and how much you want to do.

Teams to find out if you have an ambassador in your local area check out the map on our website:

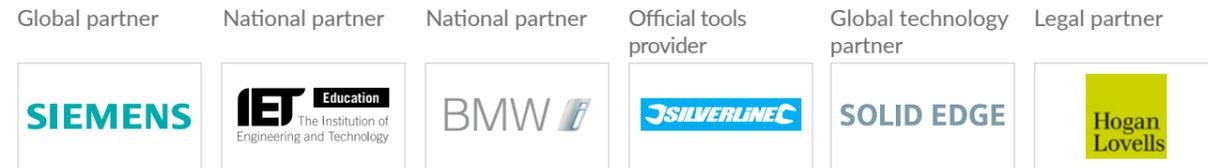
<https://www.greenpower.co.uk/volunteering#id-247>

If you are interested in becoming a Greenpower Ambassador, please contact the office: [info@greenpower.co.uk](mailto:info@greenpower.co.uk)

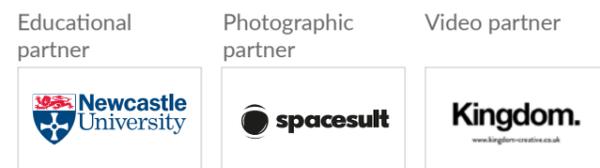


# PARTNERS

## MAIN PARTNERS



## PARTNERS



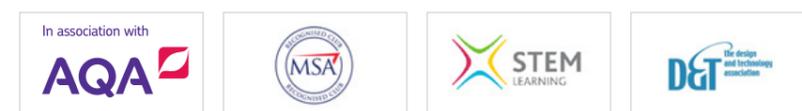
## EVENT PARTNERS



## SUPPORTERS



## RECOGNISED BY



## Win Silverline tools to the value of £1000!

How to win: Post your team updates, team milestones and use of Silverline tools on social media, include **#SilverlineTools**, **#GP2018** and **@Silverlinetools**. Document your social media activity in your team portfolio.

The team with the most creative posts will be announced the winner!

For more information and terms visit: [www.greenpower.co.uk/awards](http://www.greenpower.co.uk/awards)

*Good Luck!*



# KEY PERSONNEL & CONTACTS

Amanda Barrett - Operations Manager

Gavin Woodruff - Development & Partnership Officer

Olivia Procter-Moore - Project Manager

Steve Newman - Stores & Technical Manager

Lisa Roberts - Finance Manager

Leah Clack - Office Administrator

## TRUSTEES

Chris Baylis

Alex Badowski

Emma Kerr

Lisa Russell

Mark Groves

Nash Vracas

Vaughan Clarke

Debbie Beale

Marcus Hall

Stuart Morgan

## PATRONS

The Duke of Richmond

David Richards CBE

Allan Cook CBE

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Greenpower Education Trust is a charity registered in England and Wales no. 1133536  
and in Scotland no. SC046969

[www.greenpower.co.uk](http://www.greenpower.co.uk)



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