



Cartie Construction Rules

THE TEAM

Team Captain

All teams will nominate a team captain who is responsible for the conduct of the team and who will be the official point of contact between the team and the event organisers. The team captain must be at least 18 years old on the first day of the event.

Team Members

There is no maximum to the number that can be in a team, but all team members must register. The suggested minimum number of members in a team is 2.

Drivers

All drivers must be at least 12 years old on the first day of the event.

Age Restrictions

Other than those covered by rules governing the Team Captain and Drivers (above), there are no restrictions on the age of the team members. However, the organisers will take no responsibility for the care of any minors. Teams must make proper arrangements for the care of any minors in their charge.

1. THE CARTIE

These rules apply to all entries. Competitors intending to exploit any apparent loopholes or ambiguities to gain an unfair advantage or to avoid having to comply with its spirit or intent are strongly advised to discuss their plans with the organisers well in advance to avoid disappointment and embarrassment on the day.

General

1. Decorated carties, sponsorship and advertising are encouraged. We also appreciate it if the team's name is painted onto the cartie.
2. Cartie must not have any smoke or fire devices fitted.
3. Cartie must have no loose parts or sharp edges. No loose weights will be allowed inside or outside the cartie.
4. Materials used in the construction of the cartie must be shatterproof.
5. Bodywork and controls must not impede the driver in exiting the cartie unaided. Any doors or hatches required for driver access must be readily operated from both inside and outside the cartie without the use of tools.
6. Ballast weights must be solid and must be securely attached to the cartie. The total mass of ballast must not exceed 15Kg.
7. All carties will be inspected before the event to ensure compliance with these rules.

Dimensions & Weight

- Maximum overall length: 2500mm
- Maximum overall width: 1500mm
- Minimum track: 700mm
- Maximum weight (without driver): 100 Kg
- Maximum wheel diameter: 20 inches (nominal)
- Maximum ballast: 15Kg





Wheels

1. There must be four wheels located symmetrically about the centreline of the cartie, as a matching front and rear pair.
 2. All wheels must be in load
 3. bearing contact with the road during normal operation.
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4. Tyres must be in good condition with no visible cracks in the sidewall or tread and must be inflated within their rated pressure range.

Steering

1. Steering must be by the front wheels only.
2. The steering must not; be overly sensitive, have excessive free play or have any characteristic tending to promote instability.
3. There must a rigid mechanical linkage or gearing in the steering so that large inputs produce relatively small steering outputs. The steering ratio must be at least 2.0, and should ideally be far greater than this.

Brakes

1. The cartie must have braking on at least 2 wheels on the same axle.
2. Brakes should be designed such that they can be operated effectively while keeping both hands on the steering controls.
3. Brakes must be capable of holding the cartie, with the driver on board, stationary on a dry horizontal road surface against a horizontal force of 50KgF exerted on the front towing eye.
4. Brakes must not act on either the tyres or on the road surface.

Driving Position

1. Only conventional seated, reclined, or supine driving positions are allowed.
2. Prone or head first driving positions are **not** allowed.

Tow Points

We will be towing the carties back to the start line after each run, so carties must have a permanent towing eye at the front and a tow rope guide at the rear.

Front Towing Eye

The front towing eye must be;

1. clearly visible and easily accessible
2. made of steel bar of at least 10mm diameter
3. of size and location such that a M10 clip hook can be easily attached to it
4. permanently attached during the event

Rear Tow Rope Guide

Carties must have a tow rope guide at the rear through which the tow rope can be passed to stop it from fouling on the wheels of the cartie. This does not need to be load bearing and will not be used as a tow point. It is to stop the tow rope from moving from side to side during towing.

The rope guide must be;





1. clearly visible and easily accessible
2. directly in line with the front towing eye

It should be possible to pass the tow rope quickly and easily through it (e.g., a snap hook or similar).

The towing eye and tow rope guide must be positioned to allow the tow rope to pass freely to the rear of the cartie without fouling the wheels, the steering mechanism, or the brakes, and should allow sufficient clearance that the rope is not damaged by the road surface.

Team Number

Teams will be allocated a team number before the event. This number must be clearly displayed on the cartie.

Damage

Damage of any cartie which suffers any damage during the event will be inspected before being allowed to start another run. Teams are obliged to report any damage to the Chief Technical Officer at the earliest opportunity after any incident, and in any case before their cartie is next involved in a competitive run.

Technical Compliance

Should a cartie fail to pass the safety inspection on a technicality, the organisers may allow it to take part if they are satisfied that all safety related conditions have been met. Note that the decision to exercise this rule is entirely at the discretion of the organisers and is intended to apply only to minor non-conformance to specifications that are not safety related (e.g. cartie dimensions, etc). Gross technical non-conformance or failure to reach the minimum safety standards will result in the cartie being excluded from the event.

2. THE DRIVER

The driver's body and limbs must be fully covered by suitable abrasion resistant clothing such as heavy-duty overalls, a karting suit, motorcycle leathers or similar. Sturdy footwear and abrasion resistant gloves must be worn.

A driver, who, at any time during the event, is in control of a cartie without all pieces of safety equipment properly in place, will be disqualified. This includes when the cartie is being towed back to the line.

The driver must wear a suitable helmet when in control of the cartie. The helmet should ideally comply with, and carry the appropriate markings for, any one of

- BSI 6658-85
- BSI 2495-77
- EN 22.05
- DOT FMVSS 218
- SNELL M2005, M2010, SA/K2005 or K-98
- ACU Approved

The helmet must be in good condition and worn to the manufacturer's recommendations.

3. APPLICATION AND INTERPRETATION

In all matters relating to the interpretation of these rules, the decisions of the event organisers will be final.





4. DISCLAIMER

No expressed or implied warranty of safety shall result from publication of or compliance with this specification.

This specification is not a guarantee against injury or death.

Responsibility for safe design, build and operation of the cartie rests entirely with the competitors themselves.

Cartie Competition Rules

1. Introduction

The Royal Deeside Cartie Race is a competition for gravity powered vehicles. By entering the competition, teams are deemed to have agreed to comply with the rules and conditions specified below and to follow the instructions of the event organisers.

Before taking part, all team members will be required to sign disclaimers absolving the organisers from responsibility for any injury or damage sustained while taking part in the Royal Deeside Cartie Race.

With regard to the interpretation of the rules, the organiser's decision is final.

2. Carties

Carties must conform to the Royal Deeside Cartie Construction Rules.

They must be presented for inspection in advance of the race.

Vehicles may be inspected at any time to ensure continuous compliance with the rules throughout the event.

3. The Team

Team Captain

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4. The Race

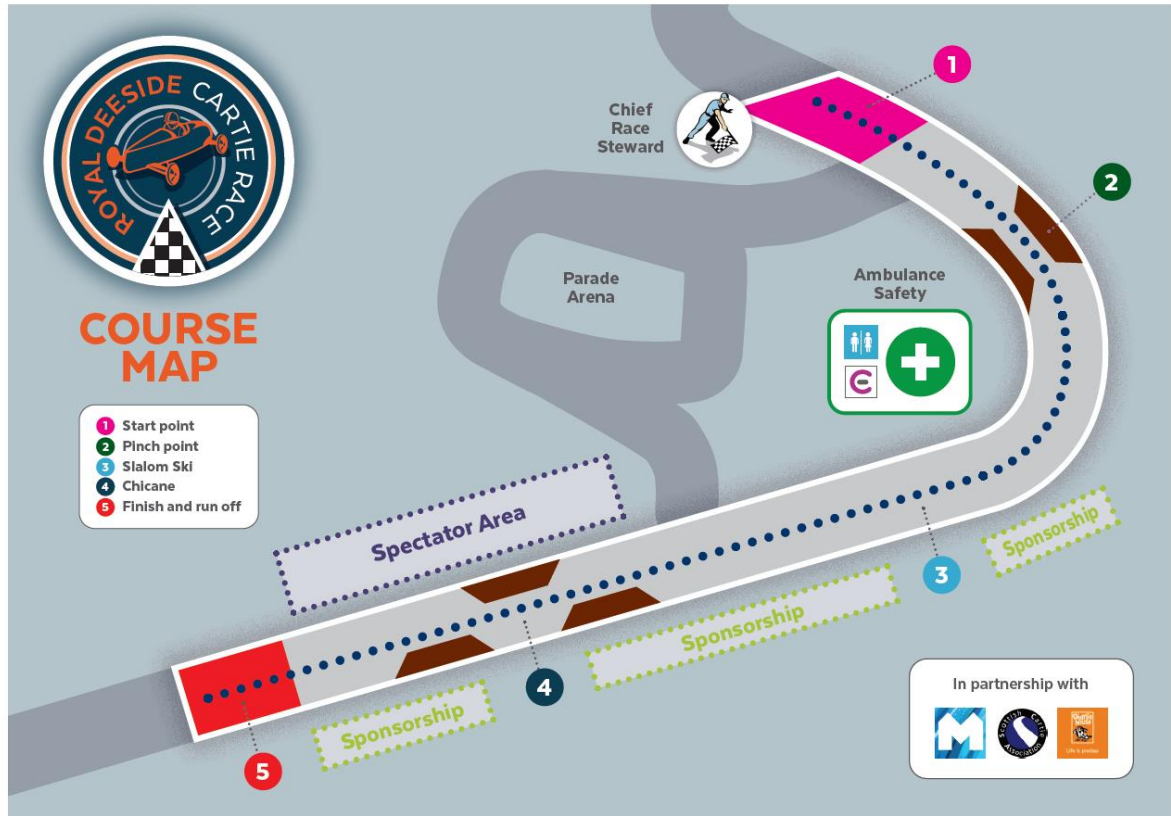
- (a) No practice is permitted on the course on the day of the time trials.
- (b) Each vehicle will be allowed up to two timed runs on the course. Teams will be allocated a starting number before the event and must be ready to begin their timed run when called by the Start Marshal. Any undue delay may result in that run being voided.
- (c) The organisers reserve the right to eliminate the slower vehicles from the event after the first run if the event is running significantly behind schedule. Please note that this is only a contingency plan and it is hoped that it will not be necessary to invoke this rule.
- (d) Each vehicle will start on the start ramp from behind a marked start line, and will be timed from the start signal to when the vehicle crosses the finish line.
- (e) The start procedure is as follows;
 1. Vehicle lines up entirely behind start line. The Start Marshall will perform a brake function test and satisfy him/herself that the driver is suitably attired and ready to go and tells driver "brakes on".
 2. Driver applies brakes fully to hold the cartie on the ramp behind the start line.
 3. Starter informs timekeeper that the cartie is ready.
 4. Timekeeper calls 3 – 2 – 1 – go!, at which point the clock will start and the driver can release the brakes and proceed down the track.
 5. When the vehicle crosses the finish line, the timekeeper stops the clock and records the time.
 6. Any penalties, such as false starts and slalom cone hits, will be signalled to the Timekeeper and added on to the time for the run to produce the final time for the run.
- (f) The driver of the vehicle must not intentionally touch the ground or get out of the cartie during the run, excepting if the vehicle has come to a complete stop. If the vehicle has come to a complete stop, the driver may get out of the vehicle and/or touch the ground only for the purpose of getting the vehicle moving in the right direction again.
- (g) In the event of the vehicle coming to a stop because of an accident, the run may not be restarted until a marshal has confirmed that the driver and passenger are fit to continue.
- (h) Team members may follow their vehicle down the course. If the vehicle comes to a complete stop they may assist in getting the vehicle moving again. Team members may push to get the vehicle moving again after it has stopped. Team members must either return to the start or move to the end of the course as quickly as possible after their run is complete.
- (i) Drivers will stop their carts as quickly as is safe if any race official gives them a stop signal (red flag). Failure to do so will result in immediate disqualification, and all previous runs will be deemed void.





5. The Course

(a) The course runs down the drive of Kincardine Castle. It is approximately 450m in length.



(b) The course will be laid out on the morning of the time trials. It will include several features to test the skill of the driver and the handling of the cartie.

6. Penalties

Certain rule infringements will incur time penalties, which will be added to the overall time for the run in which the rule infringement occurred. For the purpose of determining which run a penalty applies to, a run is deemed to start at the point at which the vehicle crossed the finish line of the previous run, or the start for the event for the first run.

The following penalties are defined;

Infringement	Penalty (seconds)
False start / push rule infringement	5
Hit slalom cone	6
Failure to stop	Disqualification

Other penalties may be applied at the discretion of the event officials.





7. The Prizes

Lowest Aggregate Time

Awarded to the team with the lowest aggregate time for all runs. In the event of a tie on aggregate time, the team with the fewer or fewest time penalties will be adjudged the winner. If, after all that, there is still no way to differentiate the teams, then the result will stand as a tie.

Best Cartie

This is voted for by the general public at the event

Supreme Champion

Teams will be awarded points for their position in the Lowest Aggregate Time and Best Cartie competitions, and the team with the highest points will be declared the Supreme Champion.

In the event of a tie on points, the team with the lowest aggregate time will be the winner.

