



EVOLOCITY

FOUNDING SPONSOR **Orion**

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EVolocity: Health & Safety Plan

Valid: 1st August 2017 to 31st December 2017

Relating to the Waikato Regional Finals Event at Kartsport Hamilton's track at Hamilton

Evolocity is a Charitable company which encourages the uptake of electric vehicles in New Zealand and promotes student enthusiasm for the skills and understandings in career areas relating to engineering, sustainability and transport technologies

Event Authority

This plan sets out the systems that are in place to maintain the safety of competitors and spectators at the event

Type of event

Students will participate in events that test the design and construction of the vehicles they have created. There will be a drag race over 50m, braking effectiveness, ability to negotiate a street circuit, an economy run, rolling resistance along with the Show and Innovation competition categories.

Racing is not encouraged except in the drag race when two vehicles will be on parallel 50m tracks at the same time.

Spectators will be allowed close to vehicles in the Pit area but will NOT be allowed on track areas when competitions are taking place.

Event Control headquarters

The control headquarters will be at the start of the Drag area and the accident register and scorer will be located there.

Communications Network

Within the venue: We will have walkie talkie radios between HQ and the safety officer with the first aid equipment.
To outside the venue: We will also use mobile phones and landline services.

Emergency Services

We hope to have an incident free event, but if something does happen people involved in running the event will be asked to assist and will be briefed to follow the steps below.

The instructions can only be a guide as no one incident will be the same. When assisting it is important that they don't endanger themselves or anyone else and keep a good lookout for approaching vehicles before moving to attend to anyone. If something happens, what is the nature of occurrence?

Minor:

1. If this is a minor incident (eg: low speed collision, grazing or similar injury):
2. Check before entering the track to ensure that you don't collide with anyone else.
3. Remove the person(s) and machinery from where they could be further at risk and attend to the issue.
4. Call for assistance and/or first aid if needed.

Major:

1. If it is a major incident (severe collision, possible broken limb or other serious injury):
2. Call a Marshall to stop the event.
3. Check before entering the track to ensure that you don't collide with anyone else.
4. Activate the kill switch on the vehicle to disconnect the battery
5. Attend to the person immediately. Call for St John staff in attendance if required.
6. If there is any possibility of serious injury please wait until first aid arrives before moving anyone and do so only under their direction.

Contact details

	What	Who	Contact
A	First Aid	St Johns	0800 367 368/111
B	Local Fire Station	Hamilton Fire station – Ray Breeze – Area manager	07-839 4996
C	NZ Police	Hamilton Central Police station	07 8586200
E	Local Medical Centre:	Angelsea clinic, Hamilton	07 858 0800
F	Kartsport Hamilton Manager:	Graeme Davison (President)	0274 44 7048
G	EVolocity Event Managers:	Rob McEwen Les Black Levinia Paku	021-728875 027-2211365 022-3720335
I	Scrutineer:	Stewart Lister	021 821 950

Vehicle Access and Egress to Venue

Vehicles will enter the KartSport Hamilton from the airport road and will park in the area marked in the map. Egress will be the reverse of this. There will be no control of the Kartsport Hamilton driveway and the main road to Hamilton Airport.

Event Intervention

If an accident does happen during an event the event will be stopped until the track is cleared and it is deemed safe to continue. Marshalls will be suitably placed to quickly reach an accident site and stop traffic. Drivers will be appropriately briefed and will also use their 'kill' switches to disconnect their batteries if involved in an accident. All of the volunteers will be suitably instructed to deal with an accident scene as first responders.

Venue Security

An EVelocity volunteer will be delegated to address public safety. This will include keeping the public and team members behind safety cones and fences while events are being staged. Events will only occur when tracks are clear of people and they are behind the safety barriers.

Accident Investigation and Reporting

Accident reporting will occur via the walkie talkie radio sets back to the HQ desk. Responses will be decided at this point and appropriate action taken. There will be an incident register at HQ to fully record any incident.

Safety of officials and Competitors

Officials and Volunteers will be briefed at immediately before the start of the first EVelocity event to cover the points below. Competitors will be briefed immediately afterwards on driving and safety points at 1pm before the events start.

Vehicles & Safety

Scrutineering:

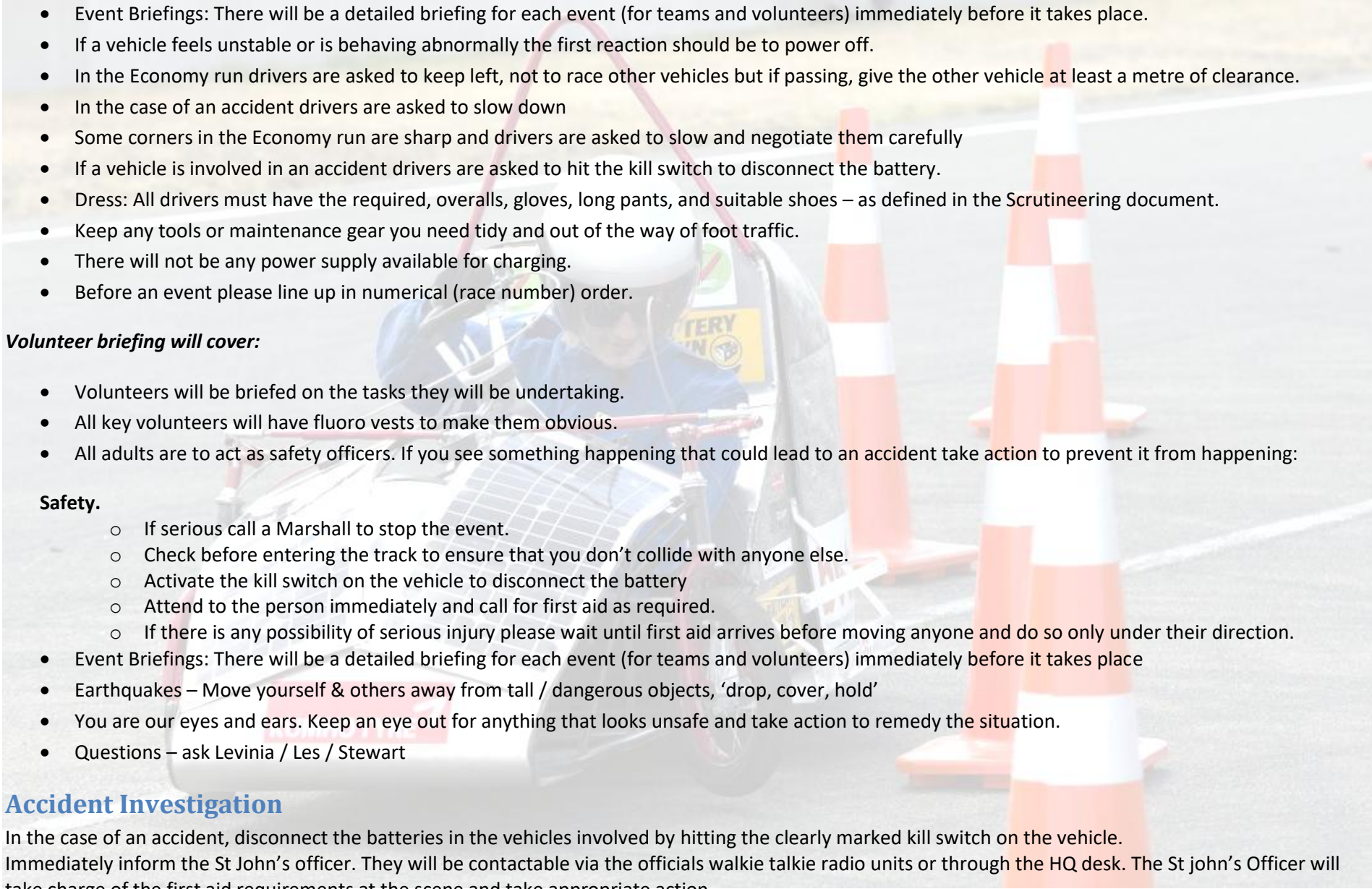
Please refer to the **Design Guidelines** (*on the EVelocity website*) for details pertaining to vehicle design and construction.

Teams will first have had their vehicle scrutineered for their regional finals but they will be reviewed again before this national finals event. A WOF will be completed to ensure compliance and vehicle number issued. Only compliant vehicles will be allowed to participate. The Design Guidelines describe the safety gear drivers will be required to wear.

Engineers or people with engineering understandings will act as scrutineers under the guidance of the Chief Scrutineer.

Driver briefing will cover:

- Drive sensibly and safely at all times (no joy riding) and act on the direction of marshals (in flouro vests).
- Scrutineering packs; mount your race number (facing the front), kill switch sticker, sponsors logos etc.

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- Event Briefings: There will be a detailed briefing for each event (for teams and volunteers) immediately before it takes place.
 - If a vehicle feels unstable or is behaving abnormally the first reaction should be to power off.
 - In the Economy run drivers are asked to keep left, not to race other vehicles but if passing, give the other vehicle at least a metre of clearance.
 - In the case of an accident drivers are asked to slow down
 - Some corners in the Economy run are sharp and drivers are asked to slow and negotiate them carefully
 - If a vehicle is involved in an accident drivers are asked to hit the kill switch to disconnect the battery.
 - Dress: All drivers must have the required, overalls, gloves, long pants, and suitable shoes – as defined in the Scrutineering document.
 - Keep any tools or maintenance gear you need tidy and out of the way of foot traffic.
 - There will not be any power supply available for charging.
 - Before an event please line up in numerical (race number) order.

Volunteer briefing will cover:

- Volunteers will be briefed on the tasks they will be undertaking.
- All key volunteers will have fluoro vests to make them obvious.
- All adults are to act as safety officers. If you see something happening that could lead to an accident take action to prevent it from happening:

Safety.

- If serious call a Marshall to stop the event.
- Check before entering the track to ensure that you don't collide with anyone else.
- Activate the kill switch on the vehicle to disconnect the battery
- Attend to the person immediately and call for first aid as required.
- If there is any possibility of serious injury please wait until first aid arrives before moving anyone and do so only under their direction.
- Event Briefings: There will be a detailed briefing for each event (for teams and volunteers) immediately before it takes place
- Earthquakes – Move yourself & others away from tall / dangerous objects, 'drop, cover, hold'
- You are our eyes and ears. Keep an eye out for anything that looks unsafe and take action to remedy the situation.
- Questions – ask Levinia / Les / Stewart

Accident Investigation

In the case of an accident, disconnect the batteries in the vehicles involved by hitting the clearly marked kill switch on the vehicle. Immediately inform the St John's officer. They will be contactable via the officials walkie talkie radio units or through the HQ desk. The St John's Officer will take charge of the first aid requirements at the scene and take appropriate action.

Any damaged vehicle must be checked by the Chief Scrutineer before resuming competition.

The accident register at HQ will need a full report to be completed. This will be reviewed by event organisers and improvements made.

Risk Assessment and Mitigation

The purpose of risk assessment is to identify:

- possible hazards
- measures that will eliminate, isolate or minimise identified hazards
- the action to control and minimise the extent of an injury.

Schools associated with teams entered in this EVelocity event will need to complete & file a level 3 RAMs report and act on it.

Risk	Action
Electrical equipment	All mains electrical equipment will have been checked and certified by a qualified electrician on an annual basis as required. Teams will ensure extension cords are not a tripping hazard. Cords will be covered, taped to the floor or placed away from walk areas. Teams are responsible for ensuring their batteries are fully charged prior to the event, as there will be no charging facilities available.
Hazards	EVelocity will compile a hazard, first aid, near miss register at the Information desk. (HQ)
Fire and Earthquake	In the event of an emergency contact Levinia / Les and they will contact ambulance services. Our location is: Kartsport Hamilton @ Hamilton Airport. Our emergency assembly point is in the grass area inside the track opposite Pit Lane. In the case of an earthquake volunteers should move people away from structures and insist on <i>DROP, COVER and HOLD.</i> When the EQ event is over marshals should guide people to the assembly point.
Drugs & Alcohol	EVelocity staff will ensure that volunteers, ambassadors, students have not consumed drugs or alcohol prior to attending.
Unstructured event	All volunteer workers will be briefed by Les Black prior to the start of events. The briefing will include information about emergency evacuation procedures, and pertinent points from this document. Volunteers will be asked to be vigilant about the safety of people arriving and leaving the area of Evelocity events. Competing vehicles will be parked in the Pit Area. Public will have access to this area and will be kept away from moving vehicles. The public will watch the schools' competition from the grass areas around the events. All vehicles will be marshaled from the Pit Area to the start line for the Drags, Street Circuit and Economy Run Drivers will drive to the left of the track and allow others to pass safely. Sharp corners around the tracks will be covered with suitable protection. While these events are happening, cones and volunteers will keep the public at a safe distance from the competing vehicles.

Vehicles & Drivers	<p>All vehicles will be scrutineered for safety before being allowed to compete.</p> <p>The vehicles cannot be altered after scrutineering. The Chief Scrutineer will examine any damaged vehicle to ensure it is safe to compete.</p> <p>A fuse & clearly marked and accessible kill switch will be fitted to EVelocity vehicles (as per Design Guidelines).</p> <p>All Evolocit volunteers will be vigilant for potential damage to any vehicles and will be proactive in preventing further damage from happening. In the case of an incident, the Regional Coordinator (Kim Tabrum), Les Black or the Lead Scrutineer are to be advised immediately, and the situation secured until it is resolved.</p> <p>Scrutineers will be vigilant in ensuring no objects protrude from the vehicles nor any sharp edges exist that could hurt people.</p> <p>All drivers are required to wear overalls, sturdy shoes, gloves and a crash helmet.</p> <p>Drivers will be instructed to power down as their first instinct should their vehicle start running abnormally or unstably.</p>
Spectators	<p>Marshals will ensure vehicles are moved safely from the marshalling area to the start line.</p> <p>Spectators will be marshaled behind coned zones when vehicles are running.</p> <p>Anybody exhibiting poor behaviour that could endanger others is to be referred to HQ and organisers.</p>
Personal harm & First aid	<p>In the case of someone being badly hurt contact Levinia Paku, or Les Black immediately.</p> <p>They will appraise its seriousness and call 111 for an ambulance if required.</p> <p>First Aid Certified personnel will be in attendance. Accidents or near misses are to be recorded on the incident register at the HQ desk.</p>
Track	<p>The general area around the track will be checked and dangerous items removed.</p> <p>Solid objects that cannot be removed situated alongside the track will be covered by cushioning materials.</p> <p>The track and immediate area will be checked before and after each event for debris or objects that could cause harm.</p>
Vehicles drop off and pick up	<p>EVolocit volunteers will supervise the arrival of school vehicles into the Pit area on map during the expected arrival time (see Teacher and team instructions). Team trailers etc will be moved to the area marked 'Parking' on the map.</p> <p>Any teams wanting to leave before racing finishes will have to push their vehicle out to the Parking area.</p>
Children	<p>Toilets will be clearly marked.</p> <p>Lost children should be kept in the immediate area for 15 minutes before taking them to the HQ for the day.</p>
Child-specific ailment	<p>Parents and caregivers are to be solely responsible for their children and their individual medical needs, ensuring that their medical requirements are on hand. In an emergency EVolocit staff will notify the emergency services.</p>