



HPV TRYATHLON 2024

SCHOOL'S HANDBOOK



MARYBOROUGH, VICTORIA
NOVEMBER 20 - 24 2024

[Version 2024.01](#)

Coordinator: Mary Preston

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INTRODUCTION TO TRYATHLON

The Tryathlon category was created in 2001 for teams who wanted a taste of the Energy Breakthrough. Since its creation the category has quickly grown in popularity and competitiveness.

After considering feedback on the 2023 TRYathlon format and reviewing our overall event schedule, we have worked up a NEW TRYathlon program for the Energy Breakthrough.

This program aims to:

- Create more cohesion between activities.
- Create more excitement and celebration opportunities for the students and teachers.
- Improve communication points between teams and officials.
- Improve safety.

We have marked up the proposed changes on the attached PDF and the schedule.
Feedback welcome until Friday 17th May at 5pm.

In short, the changes from the 2023 edition are:

- **THURSDAY:** Move the TRYathlon Secondary assessments from Friday morning to Thursday afternoon.
- **FRIDAY:** Move the Time Trial from the 'top loop' of Track 1 to Track 2.
- **FRIDAY:** Combine the Time Trial and Obstacle activities for TRY Secondary and Primary on the Friday (in 2023 they were split) to improve the atmosphere.
- **FRIDAY:** Introduce new obstacles for the Obstacle challenge.
- **FRIDAY:** Moved the Awards Ceremony.
ENDURANCE: Wave the chequered flag for the TRY Secondary teams on the BACK STRAIGHT at the conclusion of their 8 hours and marshal them near the skate park for the Awards Ceremony.
- **ENDURANCE:** Create a safe crossing time and location for TRYathlon teams to exit during the 24 Hour Trial.
- **OVERALL:** Add in some extra Team Manager Meeting times at the end of the existing briefings specifically for TRYathlon Team Managers to improve communication.

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THE CHALLENGE

Challenge: To excel across a wide variety of challenges, including a Time Trial, Obstacle Rally and Endurance trial. Entrants use the same design requirements as for Human Powered Vehicles (HPVs).



CATEGORIES AND CLASSES

Please refer to the 'Schools Handbook' for entry details of Categories and Classes. This is available to download from the 'Team Managers Hub' online.

ASSESSMENT

The Energy Breakthrough is unique in that all teams must compete across three areas of assessment: Design and Construction, Display and Presentation and Trials.

[Details of the Design & Construction and Display & Presentation components can be found in the Schools Handbook. Please ensure you refer to this document prior to the event.](#)

In the Tryathlon, Teams participate in the Display & Presentation Design & Construction sections, but also in three physical tests: Time Trial, Obstacle Rally and an 8 Hour Endurance Trial.

All sections must be attempted and points are awarded in the following sections:

SECTION	POINTS	
Display & Presentation	20	Details in Schools Handbook
Design & Construction	20	
Time trial	15	Details in TRYathlon Handbook
Obstacle	15	
Endurance Trial	30	
Total	100	

It is the responsibility of each team to ensure they complete all sections.

THE TRIALS

In this section, the operation of each entry will be tested.

Tryathlon teams will tackle a Time Trial, Obstacle Rally and an 8-hour Endurance Trial.

This year the Time Trial and Obstacle Rally will be held on Friday on Track 2. Teams are encouraged to bring pop-up marquees, chairs, banners and flags to cheer teams on throughout the day.

There will be the opportunity to make song requests and interact with our MCs on Stage who will be providing the heartbeat of the day.

Challenge 1: Time Trial

Location: [Track 2 – Front Straight](#)

Circuit Length: Approx. 600 metres per lap. Hot dog course. No Obstacles

Event Format: [Two cycles of 8 riders.](#)

- There will be three or four teams per heat.
- Each from the same class (ie. Primary and Secondary).
- Riders will each complete one lap of the Time Trial circuit before changing over in the allocated pit areas under the direction of the track marshals.
- [Each team will complete two cycles of the 8 riders. Rider 1 will complete one lap and handover to Rider 2, Rider 2 will ride one lap and handover to Rider 3 and so forth until Rider 8. Rider 8 will ride one lap and handover to Rider 1 and continue through until each rider has ridden two separate laps.](#)
- [At the conclusion of their final lap, Rider 8 will ride through the finish line to cross the timing point to record their teams time.](#)
- [Teams start from a standing start.](#)
- For Tryathlon A teams with 9 or 10 riders, 8 riders will participate in this challenge. It is a requirement that those riders omitted from this Challenge will participate in the Obstacle Rally.

Points Allocation for Time Trial

- Points will be allocated on the total team time recorded.
That is: 15 points to the team recording the fastest time.

$$\text{Time Trial Score} = 15 - \left[\left(\frac{X - Y}{Y} \right) \times 15 \right]$$

- Where Y = fastest team time recorded & X = team's own time

Challenge 2: Obstacle

Location: [Track 2 – Front Straight](#)

Circuit Length: Approx. 600 metres per lap. Hot dog course, with obstacles.

Event Format: [Two cycles of 8 riders.](#)

- There will be three or four teams per heat.

- Each from the same class (ie. Primary and Secondary).
- Riders will each complete one lap of the Time Trial circuit before changing over in the allocated pit areas under the direction of the track marshals.
- [Each team will complete two cycles of the 8 riders. Rider 1 will complete one lap and handover to Rider 2, Rider 2 will ride one lap and handover to Rider 3 and so forth until Rider 8. Rider 8 will ride one lap and handover to Rider 1 and continue through until each rider has ridden two separate laps.](#)
- [At the conclusion of their final lap, Rider 8 will ride through the finish line to cross the timing point to record their teams time.](#)
- [Teams start from a standing start.](#)
- [For Tryathlon A teams with 9 or 10 riders, 8 riders will participate in this challenge. It is a requirement that those riders omitted from this Challenge will participate in the Time Trial.](#)

- Each team will complete the Obstacle Rally, which will incorporate several stations or control challenges:

Minefield

- The classic test of handling! How fast can your riders navigate a scattering of witches hats across the track, without hitting one. There is typically two or three paths through, so take your pick and commit!

Rumble Strip

- It's been part of the Tryathlon for a number of years now and creates a great buzz for the riders. There's a 'chicken run' here if riders aren't too sure.

Ramps

- There'll be new ramps on offer this year

See Saw

- [One of our most popular obstacles will return! Four see-saws \(one for each rider in each heat\) where the rider approaches a wooden ramp, waits for the balance to 'tip' in their favour before riding away.](#)

New obstacles will also be introduced each year to keep the challenges 'fresh' and exciting!

Points Allocation for Obstacle

$$\text{Obstacle Rally Score} = 15 - \left[\left(\frac{X - Y}{Y} \right) \times 15 \right] - \text{Penalty}$$

- Where Y = fastest team time recorded (in seconds) & X = teams own time (in seconds).

Obstacle – Penalties & Infringements:

Infringement	Penalty Points
Contact with hay bale or barrier, loose seat belt and/or helmet,	0.2
Careless driving, contact with other vehicle, no seat belt, no helmet, incorrect pit change over	0.5
Very dangerous driving	1

Challenge 3: Endurance Trial

Venue: Track 1

Primary: Thursday with the HPV Primary teams.

Secondary: Saturday with the HPV Secondary and EEV teams.

Circuit Length: 1.58 km per lap

Duration: 8 hours

- [The 8 Hour Endurance Trial is conducted according to the 'HPV & EEV Trial Regulations'. To download this document, please visit the 'Team Managers' Hub' on the EB website at: https://www.eb.org.au/team-managers-hub/](https://www.eb.org.au/team-managers-hub/)
- All TRYathlon Teams will compete in a Trial event over eight hours.
- Each rider is encouraged and expected to complete at least 30 minutes riding during the Endurance Trial. [Team Managers are encouraged to keep a riders log.](#)
- Teams assemble as directed in the and the trial will commence with a rolling start behind the lead vehicle, as per the 'HPV & EEV Trial Regulations'.

[TRYathlon Primary – Endurance Trial](#)

- [The TRYathlon Endurance Trial for TRYathlon Primary teams will be held in conjunction with the HPV Primary team's 14-Hour Trial.](#)
- [TRYathlon Primary teams will participate on the Thursday of this event from 9am – 5pm.](#)
- [At the conclusion of the Trial on the Thursday, TRYathlon Primary teams will receive the chequered flag at the 'Start / Finish Line' on Stafford Straight \(main straight\).](#)
- For TRYathlon Primary teams with 9 or 10 riders, ALL riders may participate in the Trial.

[TRYathlon Primary – Bump-out of Equipment](#)

- [TRYathlon Primary teams will need to consider and plan how they can bump out their Pit resources and equipment after their Endurance Trial concludes on Thursday at 5pm. Please refer to the Event Schedule for Track 1 Access Times.](#)

[TRYathlon Secondary – Endurance Trial](#)

- [The TRYathlon Endurance Trial for TRYathlon Secondary teams will be held in conjunction with the HPV Secondary team's 24 hour Trial.](#)
- [TRYathlon Secondary teams will only participate in the first 8 hours of the Saturday of this event from 12noon – 8pm.](#)

[TRYathlon Secondary – Finish, Celebration and Presentation](#)

- [For TRYathlon Secondary, at the conclusion of their 8 hour Endurance Trial, timing with cease for TRYathlon teams. They will receive the chequered flag at a special location on the back straight and their team can meet into a 'Celebration Area' near the BBQ Shelter and skatepark area. Please refer to the Event Map for these locations.](#)
- [The Presentations for the TRYathlon Secondary classes will be held near the BBQ Shelter imminently after the conclusion of the Trial. Organisers invite everyone to come and attend these Presentations.](#)

TRYathlon Secondary – Bump-out of Equipment

- TRYathlon Secondary teams will need to consider and plan how they can bump out their Pit resources and equipment whilst the 24 Hour Trial continues. There will be a managed exit time at 9pm on Saturday evening near Marshal Point #9. This will involve the 24 Hour Trial under YELLOW flag and / or RED flag conditions to enable the safe passage of teams and equipment. Please refer to the Event Map for this location.
- Alternatively, schools may choose to leave their equipment inside Track 1 until AFTER the 24 hour trial concludes on Sunday at 12noon.

Points Allocation – Endurance Trial

- Points will be allocated on distance completed by the team. That is, 30 points to the team recording most laps.
- Other finishers: (X/Y) multiplied by 30 = points
- Where Y = highest number of laps recorded & X = team's number of laps.

THE CIRCUITS

There are two tracks in Princes Park, Maryborough surrounding the beautiful Lake Victoria. On both tracks there are some unlit sections at night, and the sealed surfaces are not “billiard table smooth”.

Track 1

Track 1 is a challenging 1.58 km street circuit that reflects real-world conditions. It encompasses Jubilee Oval, the Tennis Courts and the Skatepark.

Track 1 will be used for the [Endurance Trials](#).

Track 2

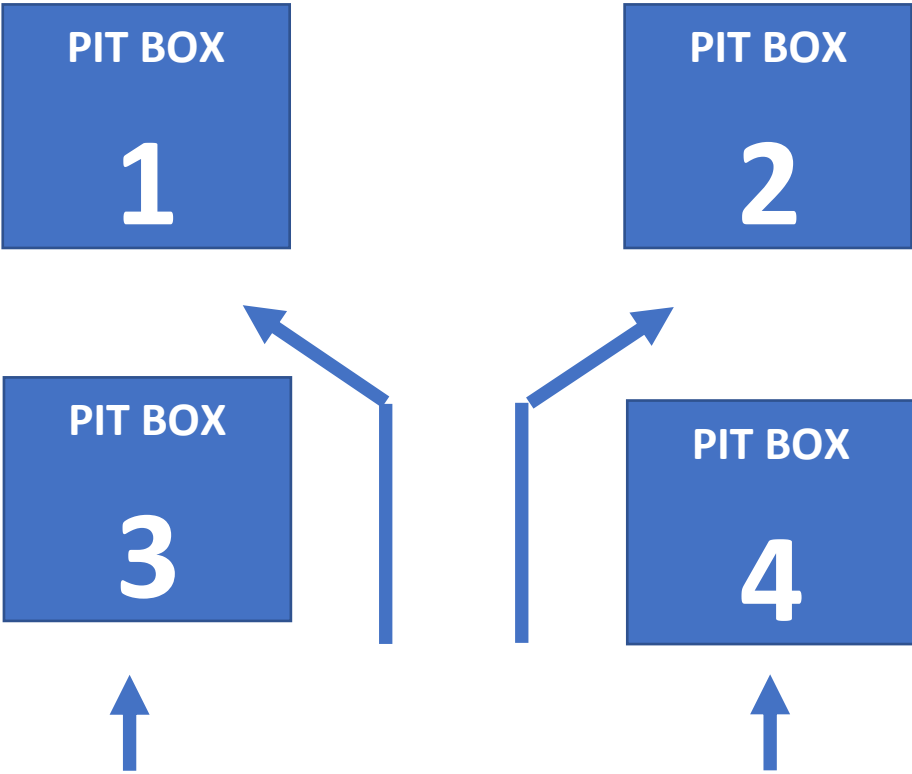
Track 2 is located between the Maryborough Caravan Park and the Princes Park oval, near Lake Victoria.

This track will be used for the [Tryathlon Obstacle Rally and TRYathlon Time Trial](#).

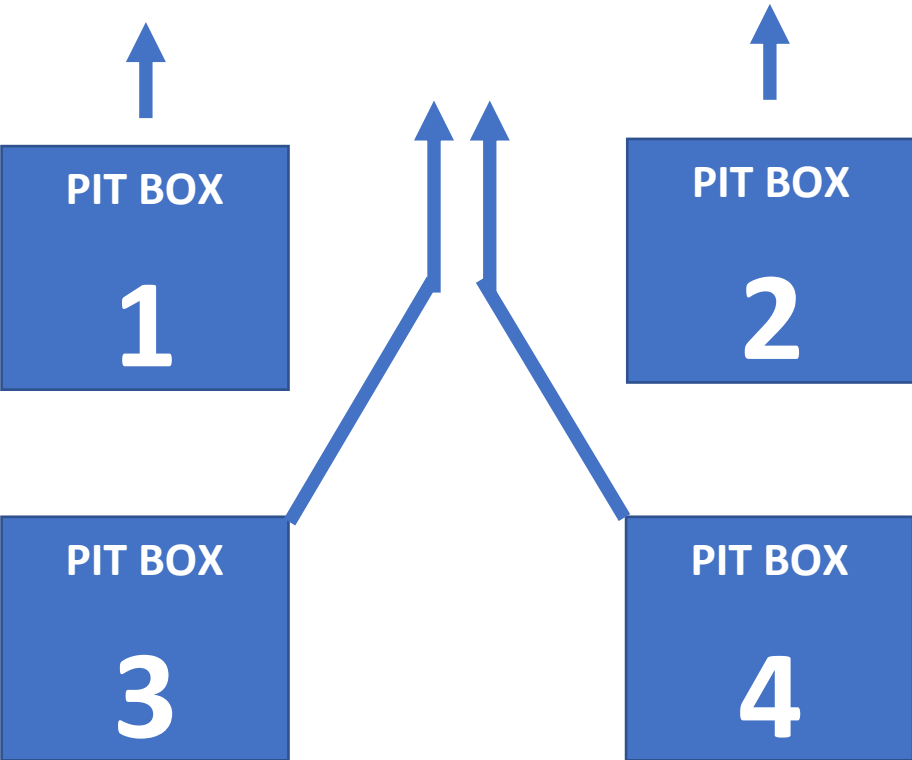
TRY-ATHLON PIT PROCEDURES

For Time Trial and Obstacle Rallies

Pit Entry:



Pit Exit:



EVENT SCHEDULE

* Schedule subject to change

Please note this schedule is subject to change.

Tuesday – 19 November 2024

Time	Activity	Who	Location
<u>Prior to 1:00PM</u>	<u>Camp Sites Closed – No access to campsites prior to this time.</u>	<u>All teams</u>	<u>Camping Areas</u>
1:00PM – Evening	Set-up Camp	Primary School Teams	Camping Areas
3:00PM – 6:00PM	Check-In Open	Primary School Teams	EB Admin Hub

Wednesday – 20 November 2024

Time	Activity	Who	Location
6:00AM – 5:00PM	Track 1 Access Open	All teams	Track 1
9:00AM – 12:00PM	Check-In Open	Primary School Teams	EB Admin Hub
9:00AM – <u>4:00PM</u>	Display and Presentation, Scrutineering, Design & Construction	Regional Roads Victoria HPV Primary & Try-athlon Primary	EB Central
9:00AM – 12:00PM	Scrutineering, Design & Construction	Pushcarts	EB Central
1:00PM – 5:00PM	Obstacle Rally	Pushcarts	Track 2
<u>4:00PM – 4:30PM</u>	<u>Team Managers Meeting</u>	<u>All Regional Roads Victoria HPV Primary & Try-athlon Primary Team Managers</u>	<u>Design & Construction Marquee, EB Central</u>
5:00PM - 9:00PM	Track 1 Access Closed	All teams	Track 1
<u>5:45PM – 6:00PM</u>	Rider Briefing	Regional Roads Victoria HPV Primary & Try-athlon Primary	Stage, Track 1
6:30PM - 8:30PM	Practice Session	HPV Primary & Try-athlon Primary	Track 1
9:00PM Wed – 8:00AM Thu	Track 1 Access Open	All teams	Track 1

Thursday – 21 November 2024

Time	Activity	Who	Location
8:00AM - 5:00PM	Track 1 Access Closed	All teams	Track 1
9:00AM - 12:00PM	Check-In Open	Secondary School teams and Junkyard Challenge	EB Admin Hub
8:00 AM - 9:00 AM	Grid Formation	Regional Roads Victoria HPV Primary & Try-athlon Primary	Stafford Straight, Track 1
9:00AM - 5:00PM	Endurance Trial (Part 1 of 2)	Regional Roads Victoria HPV Primary	Track 1
9:00AM - 5:00PM	Endurance Trial	Tryathlon Primary	Track 1
9:00AM - 12:00PM	Endurance	Pushcarts	Track 2
9:45AM - 12:00PM	Junkyard Challenge	Junkyard Challenge	EB Central
1:00PM - 4:00PM	Sprint	Pushcarts	Track 2
1:00PM - 4:00PM	Display and Presentation, Scrutineering, Design & Construction	TRYathlon Secondary	EB Central
4:00PM – 4:30PM	TRYathlon Team Managers Meeting	Try-athlon Secondary Team Managers	Design & Construction Marquee, EB Central
4:00PM - 6:00PM	Check-In Open	Secondary HPV, EEV and Robotics	EB Admin Hub
5:00PM	Awards Ceremony	Pushcarts	Stage, Track 2
5:30PM – 5:30AM Fri	Track 1 Access Open	All Teams	Track 1
6:30PM – 7:30PM	Show N Shine	Open to all teams	EB Central
From 7:30PM	Open Air Movie	Open to all teams	EB Central

Friday – 22 November 2024

Time	Activity	Who	Location
5:30AM - 1:00PM	Track 1 Access Closed	All teams	Track 1
6:00AM - 12:00PM	Trial (Part 2/2)	Regional Roads Victoria HPV Primary	Track 1
8:30AM – 12:00PM	Check-In open	HPV Secondary, EEV & Robotics	EB Admin Hub
9:00AM - 5:00PM	Display and Presentation, Scrutineering, Design & Construction	HPV Secondary & EEV	EB Central
9:00AM - 12:00PM	Obstacle Rally	TRYathlon	Track 2
9:30AM - 1:30PM	Robotics – Sphero Global Challenge	Robotics	EB Central
1:00PM	Awards Ceremony	Regional Roads Victoria HPV Primary	EB Central
1:00PM – 6:00PM	Track 1 Access Open	All teams	Track 1
AFTERNOON	Teams Pack Up and Depart	Primary School teams	Camping Areas
1:00PM - 4:00PM	Time Trial	TRYathlon	Track 2
4:30PM	Awards Ceremony - TRYathlon Primary teams	TRYathlon Primary teams	Stage, Track 2
5:00PM	Team Captains Meeting	HPV Secondary, EEV & Try-athlon Secondary Team Captains	Design & Construction Marquee, EB Central
5:30PM	Team Managers Meeting	HPV Secondary, EEV & Try-athlon Secondary Team Managers	Design & Construction Marquee, EB Central
6:00PM – 9:30PM	Track 1 Access Closed	All teams	Track 1
7:30PM - 9:30PM	Practice Session	HPV Secondary, EEV & Try-athlon Secondary	Track 1
9:30PM – 10:00AM Sat	Track 1 Access Open	All teams	Track 1

Saturday – 23 November 2024

Time	Activity	Who	Location
9:30PM Fri – 10:00AM Sat	Track 1 Access Open	All teams	Track 1
9:00AM	EEV Battery Briefing	EEV Teams	EEV Charging Container
10:00AM Sat – 12:30PM Sun	Track 1 Access Closed	All teams	Track 1
11:00AM - 12:00PM	Grid Formation	HPV Secondary, EEV teams & TRYathlon Secondary teams	Stafford Straight, Track 1
12:00 Saturday - 12:00 Sunday	Trial - 24 Hours	HPV Secondary & EEV teams	Track 1
12:00 Saturday - 8:00PM	Trial - 8 Hours	TRYathlon Secondary teams	Track 1
8:00 PM	Trial Finish	TRYathlon Secondary teams	Back straight, Track 1
8:30 PM	Awards Ceremony	TRYathlon Secondary teams	Skate Park BBQ Shelter
9:00PM	TRYathlon Teams managed safe track crossing	TRYathlon Secondary teams	Marshal Point #11

Sunday – 24 November 2024

Start Time	Activity	Category	Location/s
12:00PM	HPV Secondary and EEV Trial Concludes	HPV Secondary & EEV	Track 1
12:30PM	Track 1 Access Open	All teams	Track 1
1:00PM	HPV Secondary and EEV Presentations	HPV Secondary & EEV	EB Central
AFTERNOON	Teams Pack Up and Depart	HPV Secondary & EEV	

A B C D E F G H I J K L M N O P Q R S T U V W X



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16



ENERGY BREAKTHROUGH SITE KEY

- | | | | | | |
|--|---------------------|--|-----------------------|--|---|
| | First Aid | | Toilets | | Scutineering |
| | Assembly Area | | Showers | | Pushcart Changeover Point |
| | Camping Area | | Accessible Toilet | | Trackside Marquee |
| | Food & Refreshments | | Masseur | | CEP Stage |
| | BBQ Shelter | | Wrist Banding Station | | Display & Presentation |
| | Drinking Water | | EEV Recharge Station | | Design & Construction /
Junkyard Challenge /
Team Managers Meetings |
| | Crockery Wash Bay | | Parts and Repairs | | Marshall Point (numbered) |
| | | | | | Start/Finish |
| | | | | | Parking Area |
| | | | | | Restricted Parking Area |
| | | | | | Bus Drop Off |
| | | | | | Road Closed |
| | | | | | Gate (numbered) |
| | | | | | Gate (numbered) |
| | | | | | Marshall Point (numbered) |
| | | | | | Start/Finish |
| | | | | | Scutineering |
| | | | | | Robotics / Pushcarts / Exhibitors |
| | | | | | Event Operations Centre |
| | | | | | Exhibitors (EB Central) |
| | | | | | Bridge |
| | | | | | One way traffic only |
| | | | | | Walking track only |

Energy Breakthrough is a non-smoking event

BALLARAT/AVOCA →
Map not to scale.