

2018 INFORMATION KIT
PART B: HPV PRIMARY

ENERGY BREAKTHROUGH

21-25 NOVEMBER 2018 | MARYBOROUGH, VICTORIA

POWERED BY IMAGINATION

THE PREMIER SCIENCE, TECHNOLOGY, ENGINEERING AND MATHS, ACTIVE LEARNING PROGRAM

A PARTNERSHIP BETWEEN



eb.org.au

HUMAN POWERED VEHICLES (HPVs) - PRIMARY*

All Track activities are on the VicRoads Track.

All teams should have arrived and registered by 12noon on Thursday. Display & Presentation and Design & Construction schedules will be prepared with this in mind.

WEDNESDAY 21 NOVEMBER

1.00pm – 5.00pm Registration open

Location: Administration Centre

3.30pm – 6.00pm Design and Construction and Scrutineering

Location: Display & Presentation marquees

THURSDAY 22 NOVEMBER

9.00am Registration opens

Location: Administration Centre

9.00am – 5.00pm Display and Presentations

Location: Display & Presentation marquees

8.30am – 5.30pm Design and Construction and Scrutineering

Location: Display & Presentation marquees

6.00pm Rider Briefing

Location: In front of VicRoads Track Stage

6.30pm – 8.30pm Practice Session

VicRoads Track

FRIDAY 23 NOVEMBER

11.00am Team Managers' Briefing

Location: Rear of VicRoads Track Stage

11.30am Assembly of Starting Grid

Location: Front Straight, VicRoads Track

12 noon HPV A Trial Start

Location: VicRoads Track

8.00pm Compulsory HPV A Break

SATURDAY 24 NOVEMBER

6.00am HPV A Restart

Location: Pit Lane, VicRoads Track

12 noon HPV A Trial Finish

3.30pm Presentation Ceremony (Primary)

Location: Stage in Energy Expo area

SUNDAY 25 NOVEMBER

No activities

*** PLEASE NOTE THAT THIS TIMETABLE IS SUBJECT TO AMENDMENTS**

TEAM NUMBERS – HPV A

No.	Team Name	School	Class
1	Torpeco	White Hills Primary School	A2 (more than 200 students)
2	EcoRush	White Hills Primary School	A2 (more than 200 students)
3	Team 1	Maryborough Education Centre	A2 (more than 200 students)
4	Team 2	Maryborough Education Centre	A2 (more than 200 students)
5	Haileybury Hailstorm	Haileybury College	A2 (more than 200 students)
305	Haileybury Hornets	Haileybury College	A2 (more than 200 students)
6	Haileys Comet	Haileybury College	A2 (more than 200 students)
7	Creepers	Kororoit Creek Primary School	A2 (more than 200 students)
8	Storm Breaker	Morwell Park Primary School	A2 (more than 200 students)
9	Katchmi Jnr	Morwell Park Primary School	A2 (more than 200 students)
10	Redback Junior	Carisbrook Primary School	A2 (more than 200 students)
11	Redback Mercury	Carisbrook Primary School	A2 (more than 200 students)
12	Pyrenees Platinum	Avoca Primary School	A1 (200 or less students)
13	Carbon Zero	Pleasant Street Primary School	A2 (more than 200 students)
14	Team 1	Horsham West and Haven PS	A2 (more than 200 students)
314	Team 3	Horsham West and Haven PS	A2 (more than 200 students)
15	Team 2	Horsham West and Haven PS	A2 (more than 200 students)
16	Aussie! Aussie! Aussie!	Talbot Primary School	A1 (200 or less students)
17	Oi! Oi! Oi!	Talbot Primary School	A1 (200 or less students)
18	Magic Pud	Elphinstone Primary School	A1 (200 or less students)
19	Sminglewood	St Mary's Primary School	A1 (200 or less students)
20	Team 1	Delacombe Primary School	A2 (more than 200 students)
21	Team 2	Delacombe Primary School	A2 (more than 200 students)
22	Team 1	Garfield Primary	A1 (200 or less students)
23	Vanquish	Jells Park Primary School	A2 (more than 200 students)
24	Shazzam	Jells Park Primary School	A2 (more than 200 students)
25	NRG Riders	Lloyd Street Primary School	A2 (more than 200 students)
26	Team 1	Maiden Gully Primary School	A2 (more than 200 students)
27	Team 2	Maiden Gully Primary School	A2 (more than 200 students)
28	Willmott Park Warriors	Willmott Park Primary School	A2 (more than 200 students)
29	Willmott Park Wizards	Willmott Park Primary School	A2 (more than 200 students)
30	Spirit of Diamond Creek	Diamond Creek Primary School	A2 (more than 200 students)
31	Team 1 TOOT 1	Tootgarook Primary School	A2 (more than 200 students)
32	Team 2 TOOT 2	Tootgarook Primary School	A2 (more than 200 students)
33	OSCAR- BPS	Berwick Primary School	A2 (more than 200 students)
34	COOKIE- BPS	Berwick Primary School	A2 (more than 200 students)
35	Optimus Prime	Mount Pleasant Primary School	A1 (200 or less students)
36	Lucknow Lightning	Lucknow Primary School	A2 (more than 200 students)

No.	Team Name	School	Class
37	Shrek In It	Terang College	A1 (200 or less students)
38	Arrow Dynamic	Creek Street Christian College	A2 (more than 200 students)
39	Gecko 1	Seymour College	A2 (more than 200 students)
339	Gecko 3	Seymour College	A2 (more than 200 students)
40	Gecko 2	Seymour College	A2 (more than 200 students)
41	Gembrook 1	Gembrook Primary School	A1 (200 or less students)
42	Gembrook 2	Gembrook Primary School	A1 (200 or less students)
43	KPS Shooting Stars - Lightning	Kingswood Primary School	A2 (more than 200 students)
44	KPS Shooting Stars - Thunder	Kingswood Primary School	A2 (more than 200 students)
45	Team 1	Bonbeach Primary School	A2 (more than 200 students)
46	YPCC1	Yuille Park Community College	A1 (200 or less students)
47	YPCC2	Yuille Park Community College	A1 (200 or less students)
48	Benton Bullets	Benton Junior College	A2 (more than 200 students)
49	Benton Bandits	Benton Junior College	A2 (more than 200 students)
50	Team 1	Avenel Primary School	A1 (200 or less students)
51	Team 2	Avenel Primary School	A1 (200 or less students)
52	wolves	Cranbourne West PS	A2 (more than 200 students)
53	pups	Cranbourne West PS	A2 (more than 200 students)
54	BURRA BURN	Korumburra Primary School	A2 (more than 200 students)
55	BURRA BLITZ	Korumburra Primary School	A2 (more than 200 students)
56	Dynamite	Clunes Primary School	A1 (200 or less students)
57	Caledonian Team 1	Caledonian Primary School	A2 (more than 200 students)
58	Thunder	Canadian Lead Primary School	A1 (200 or less students)
59	Lightning	Canadian Lead Primary School	A1 (200 or less students)
60	Frankstorm	Frankston Heights PS	A2 (more than 200 students)
61	Frankston Flamers	Frankston Heights PS	A2 (more than 200 students)
62	XLR8	Leongatha Primary School	A2 (more than 200 students)
63	Bulletproof	Leongatha Primary School	A2 (more than 200 students)
64	Zero Gravity	Mt Eliza Primary School	A2 (more than 200 students)
65	Light Speed	Mt Eliza Primary School	A2 (more than 200 students)
66	Lightning	Niddrie Primary School	A2 (more than 200 students)
67	Team 2	Niddrie Primary School	A2 (more than 200 students)
68	Overport Eagles	Overport Primary School	A2 (more than 200 students)
69	Overport United	Overport Primary School	A2 (more than 200 students)
70	Red Rockets	Tooradin Primary School	A2 (more than 200 students)
71	Flamin\' Mozzies	Tooradin Primary School	A2 (more than 200 students)
72	Mistral	The Peninsula School	A2 (more than 200 students)
73	Fire Crackers	Derinya Primary School	A2 (more than 200 students)
373	Hypersonic	Derinya Primary School	A2 (more than 200 students)

No.	Team Name	School	Class
74	Hot Wheels	Derinya Primary School	A2 (more than 200 students)
75	Team 1	Pearcedale Primary School	A1 (200 or less students)
76	Moreland Night Riders	Moreland Primary School	A2 (more than 200 students)
77	ENPS Predator	Eaglehawk North Primary School	A2 (more than 200 students)
78	ENPS Raptor	Eaglehawk North Primary School	A2 (more than 200 students)
79	Pacman	Golden Square Primary School	A2 (more than 200 students)
80	Ghost	Golden Square Primary School	A2 (more than 200 students)
81	Lockwood Legends	Lockwood Primary School	A1 (200 or less students)
82	Quarry Hill PS	Quarry Hill Primary School	A2 (more than 200 students)
83	Kennington 1	Kennington Primary School	A2 (more than 200 students)
84	Kennington 2	Kennington Primary School	A2 (more than 200 students)
85	Going, Going, Gone.	Strathfieldsaye Primary School	A2 (more than 200 students)
86	Hot Property	Strathfieldsaye Primary School	A2 (more than 200 students)
87	Team 1	Marist College Bendigo	A1 (200 or less students)
88	Team 1	St. Augustine's Primary School	A2 (more than 200 students)
89	Team 2	St. Augustine's Primary School	A2 (more than 200 students)

PIT AREAS

- Where possible, pit numbers are the same as the team number.
- All pit sites are numbered.
- Team numbers with a “3” or “4” prefix indicate where a school with three teams will use a total of two pit spaces. Eg. Team “310” shares pit space number 10 with team number 10.
- All pit sites must be set-up as per the direction of Event Officials and changes may be required at the Officials discretion.
- All pit sites are approximately 2.8 m – 3 m wide by 2 metres deep.
- All teams must leave approximately 1 m clearance area in front of their pit site for rider changeovers and for other teams to have line of sight of the track and pit lane.
- There is no existing shelter in the pit areas. Teams are encouraged to erect a small tent, or arrange to share a tent with another team.
- During the event there is restricted access to the pit area.
- If the surface of your pit area is hard, that is concrete and asphalt, securing tents will require water or sand filled weights rather than pegs.
- Pit areas should NOT be set up too early. 90 mins prior to your scheduled practice sessions should be adequate.
- HPV Primary teams and TRYathlon teams will be required to share pit spaces for the TRYathlon Practice session on Friday evening. Your assistance and patience with this is appreciated.
- HPV Primary teams will also need to dismantle and clear their pit spaces quickly after the conclusion of the HPV Primary trial to allow time for the TRYathlon teams to set-up for their Endurance trial.
- **Closed shoes must be worn in pit lane.**
- **Maximum speed in the pit area in 10km/h**

DISPLAY AND PRESENTATION THURSDAY 22/11/2018													
TIME	Panel 1			Panel 2			Panel 3				Panel 4		
9.30 am	1A	22	Garfield Primary	2A	75	Pearcedale Primary School	3A		45	Bonbeach Primary School	4A	33	Berwick Primary School
10.00 am	1B	35	Mount Pleasant Primary School	2B	87	Marist College Bendigo	3B		3	Maryborough Education Centre	4B	88	St. Augustine's Primary School
11.00 am	1A	12	Avoca Primary School	2A	41	Gembrook Primary School	3A		76	Moreland Primary School	4A	4	Maryborough Education Centre
11.30 am	1B	16	Talbot Primary School	2B	19	St Mary's Primary School	3B		38	Creek Street Christian College	4B	30	Diamond Creek Primary School
12 noon	1A	42	Gembrook Primary School	2A	50	Avenel Primary School	3A		83	Kennington Primary School	4A	49	Benton Junior College
1.30 pm	1B	51	Avenel Primary School	2B	17	Talbot Primary School	3B		48	Benton Junior College	4B	84	Kennington Primary School
2.00 pm	1A	56	Clunes Primary School	2A	37	Terang College	3A		62	Leongatha Primary School	4A	25	Lloyd Street Primary School
2.30 pm	1B	58	Canadian Lead Primary School	2B	46	Yuille Park Community College	3B		21	Delacombe Primary School	4B	11	Carisbrook Primary School
3.30 pm	1A	47	Yuille Park Community College	2A	59	Canadian Lead Primary School	3A		10	Carisbrook Primary School	4A	63	Leongatha Primary School
4.00 pm	1B	81	Lockwood Primary School	2B	20	Delacombe Primary School	3B		57	Caledonian Primary School	4B	43	Kingswood Primary School
4.30 pm	1A	18	Elphinstone Primary School	2A	7	Kororoit Creek Primary School	3A		#N/A	#N/A	4A	#N/A	#N/A

DISPLAY AND PRESENTATION THURSDAY 22/11/2018												
TIME	Panel 5			Panel 6			Panel 7			Panel 8		
9.30 am	5A	23	Jells Park Primary School	6A	8	Morwell Park Primary School	7A	39	Seymour College	8A	54	Korumburra Primary School
10.00 am	5B	85	Strathfieldsaye Primary School	6B	72	The Peninsula School	7B	73	Derinya Primary School	8B	61	Frankston Heights Primary School
11.00 am	5A	34	Berwick Primary School	6A	86	Strathfieldsaye Primary School	7A	60	Frankston Heights Primary School	8A	74	Derinya Primary School
11.30 am	5B	68	Overport Primary School	6B	24	Jells Park Primary School	7B	89	St. Augustine's Primary School	8B	40	Seymour College
12 noon	5A	52	Cranbourne West Primary School	6A	28	Willmott Park Primary School	7A	5	Haileybury College	8A	31	Tootgarook Primary School
1.30 pm	5B	29	Willmott Park Primary School	6B	53	Cranbourne West Primary School	7B	314	Horsham West and Haven Primary School	8B	6	Haileybury College
2.00 pm	5A	82	Quarry Hill Primary School	6A	69	Overport Primary School	7A	1	White Hills Primary School	8A	64	Mt Eliza Primary School
2.30 pm	5B	44	Kingswood Primary School	6B	15	Horsham West and Haven Primary School	7B	71	Tooradin Primary School	8B	67	Niddrie Primary School
3.30 pm	5A	14	Horsham West and Haven Primary School	6A	27	Maiden Gully Primary School	7A	79	Golden Square Primary School	8A	2	White Hills Primary School
4.00 pm	5B	9	Morwell Park Primary School	6B	70	Tooradin Primary School	7B	36	Lucknow Primary School	8B	77	Eaglehawk North Primary School
4.30 pm	5A	26	Maiden Gully Primary School	6A	###	#N/A	7A	#N/A	#N/A	8A	#N/A	#N/A

DISPLAY AND PRESENTATION THURSDAY 22/11/2018												
TIME	Panel 9			Panel 10			Panel 11			Panel 12		
9.30 am	9A	65	Mt Eliza Primary School	10A	108	Kilberry Valley Primary School	11A	159	Rowellyn Park Primary School	12A	164	Mornington Primary School
10.00 am	9B	32	Tootgarook Primary School	10B	150	New Gisborne Primary	11B	122	Emerald Primary School	12B	115	Beaconsfield Primary School
11.00 am	9A	55	Korumburra Primary School	10A	155	Natte/Amphi Primary Schools	11A	145	Bonbeach Primary School	12A	158	Rowellyn Park Primary School
11.30 am	9B	80	Golden Square Primary School	10B	123	Emerald Primary School	11B	163	Mornington Primary School	12B	151	Kingsley Park Primary School
12 noon	9A	373	Derinya Primary School	10A	134	St Margarets School and Berwick Grammar School	11A	106	Briagolong Primary School	12A	111	Carisbrook Primary School
1.30 pm	9B	339	Seymour College	10B	126	Maiden Gully Primary School	11B	133	St Margarets School and Berwick Grammar School	12B	145	Bonbeach Primary School
2.00 pm	9A	305	Haileybury College	10A	107	Briagolong Primary School	11A	167	Laurimar Primary School	12A	120	Lyndhurst Primary School
2.30 pm	9B	78	Eaglehawk North Primary School	10B	156	Tyabb Primary School	11B	127	Maiden Gully Primary School	12B	165	Flemington Primary School
3.30 pm	9A	13	Pleasant Street Primary School	10A	136	Lucknow Primary School	11A	157	Tyabb Primary School	12A	102	St Therese's Primary School
4.00 pm	9B	66	Niddrie Primary School	10B	169	Laurimar Primary School	11B	166	Flemington Primary School	12B	125	Cockatoo Primary School
4.30 pm	9A	#N/A	#N/A	10A	128	Yarrowonga College P-12	11A	101	St Therese's Primary School	12A	174	St. Augustine's Primary School

DISPLAY AND PRESENTATION THURSDAY 22/11/2018													
TIME	Panel 13			Panel 14			Panel 15				Panel 16		
9.30 am	13A	104	Maryborough Education Centre	14A	160	Gleneagles Secondary	15A		#N/A	#N/A	16A	#N/A	#N/A
10.00 am	13B	112	EDEC HPV Team	14B	139	Seymour College	15B		116	Beaconsfield Primary School	16B	149	Nathalia Secondary College
11.00 am	13A	118	Beaconsfield Upper Primary School	14A	113	EDEC HPV Team	15A		140	Seymour College	16A	161	Gleneagles Secondary
11.30 am	13B	121	Lyndhurst Primary School	14B	152	Ballarat Christian College	15B		109	Kyabram P-12 College	16B	119	Beaconsfield Upper Primary School
12 noon	13A	146	Toorak College	14A	168	Laurimar Primary School	15A		114	EDEC HPV Team	16A	138	Seymour College
1.30 pm	13B	147	Toorak College	14B	141	Rossbourne School	15B		135	St Margarets School and Berwick Grammar School	16B	124	Emerald Primary School
2.00 pm	13A	175	St. Augustine's Primary School	14A	137	Cranbourne Secondary College	15A		105	Ballarat Specialist School	16A	132	Mount Beauty Secondary College
2.30 pm	13B	103	St Therese's Primary School	14B	144	North Geelong Secondary College	15B		142	Rossbourne School	16B	171	Koo Wee Rup Secondary College
3.30 pm	13A	148	Toorak College	14A	129	Yarrowonga College P-12	15A		154	Emerald Secondary College	16A	143	Rossbourne School
4.00 pm	13B	172	Ss Michael and John's Primary School	14B	170	Koo Wee Rup Secondary College	15B		131	Mount Beauty Secondary College	16B	173	Nelson Park School
4.30 pm	13A	130	Yarrowonga College P-12	14A	###	#N/A	15A		#N/A	#N/A	16A	#N/A	#N/A

DESIGN AND CONSTRUCTION WEDNESDAY 21/11/2018

TIME	Panel 1		Panel 2		Panel 3		Panel 4	
3:30 PM	10	Carisbrook Primary School	11	Carisbrook Primary School	111	Carisbrook Primary School	#N/A	#N/A
3:50 PM	174	St. Augustine's Primary School	175	St. Augustine's Primary School	88	St. Augustine's Primary School	#N/A	#N/A
4:10 PM	52	Cranbourne West Primary School	53	Cranbourne West Primary School	89	St. Augustine's Primary School	#N/A	#N/A
4:30 PM	122	Emerald Primary School	123	Emerald Primary School	124	Emerald Primary School	#N/A	#N/A
4:50 PM	22	Garfield Primary	62	Leongatha Primary School	63	Leongatha Primary School	#N/A	#N/A
5:10 PM	60	Frankston Heights Primary School	61	Frankston Heights Primary School	87	Marist College Bendigo	155	Natte/Amphi Primary Schools
5:30 PM	54	Korumburra Primary School	55	Korumburra Primary School	23	Jells Park Primary School	24	Jells Park Primary School

DESIGN AND CONSTRUCTION THURSDAY 22/11/2018

TIME	Panel 1		Panel 2		Panel 3		Panel 4	
8:30 AM	31	Tootgarook Primary School	68	Overport Primary School	74	Derinya Primary School	#N/A	#N/A
8:50 AM	42	Gembrook Primary School	76	Moreland Primary School	40	Seymour College	339	Seymour College
9:10 AM	48	Benton Junior College	30	Diamond Creek Primary School	64	Mt Eliza Primary School	373	Derinya Primary School
9:30 AM	25	Lloyd Street Primary School	49	Benton Junior College	67	Niddrie Primary School	163	Mornington Primary School
9:50 AM	7	Kororoit Creek Primary School	9	Morwell Park Primary School	1	White Hills Primary School	2	White Hills Primary School
10:10 AM	19	St Mary's Primary School	43	Kingswood Primary School	44	Kingswood Primary School	6	Haileybury College
10:30 AM	18	Elphinstone Primary School	33	Berwick Primary School	69	Overport Primary School	39	Seymour College
10:50 AM	75	Pearcedale Primary School	45	Bonbeach Primary School	8	Morwell Park Primary School	65	Mt Eliza Primary School
11:10 AM	35	Mount Pleasant Primary School	46	Yuille Park Community College	27	Maiden Gully Primary School	73	Derinya Primary School
11:30 AM	56	Clunes Primary School	17	Talbot Primary School	85	Strathfieldsaye Primary School	32	Tootgarook Primary School
11:50 AM	47	Yuille Park Community College	3	Maryborough Education Centre	72	The Peninsula School	77	Eaglehawk North Primary School
12:50 PM	112	EDEC HPV Team	38	Creek Street Christian College	34	Berwick Primary School	70	Tooradin Primary School
1:10 PM	12	Avoca Primary School	57	Caledonian Primary School	14	Horsham West and Haven Primary School	108	Kilberry Valley Primary School
1:30 PM	16	Talbot Primary School	113	EDEC HPV Team	26	Maiden Gully Primary School	150	New Gisborne Primary
1:50 PM	81	Lockwood Primary School	20	Delacombe Primary School	114	EDEC HPV Team	66	Niddrie Primary School
2:10 PM	41	Gembrook Primary School	4	Maryborough Education Centre	86	Strathfieldsaye Primary School	36	Lucknow Primary School
2:30 PM	50	Avenel Primary School	28	Willmott Park Primary School	80	Golden Square Primary School	159	Rowellyn Park Primary School

DESIGN AND CONSTRUCTION THURSDAY 22/11/2018								
TIME	Panel 1		Panel 2		Panel 3		Panel 4	
3:20 PM	58	Canadian Lead Primary School	83	Kennington Primary School	84	Kennington Primary School	137	Cranbourne Secondary College
3:40 PM	#N/A	#N/A	21	Delacombe Primary School	145	Bonbeach Primary School	156	Tyabb Primary School
4:00 PM	37	Terang College	29	Willmott Park Primary School	71	Tooradin Primary School	132	Mount Beauty Secondary College
4:20 PM	59	Canadian Lead Primary School	15	Horsham West and Haven Primary School	314	Horsham West and Haven Primary School	#N/A	#N/A
4:40 PM	82	Quarry Hill Primary School	79	Golden Square Primary School	78	Eaglehawk North Primary School	13	Pleasant Street Primary School
5:00 PM	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

TIME	Panel 5		Panel 6		Panel 7	
8:30 AM	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
8:50 AM	158	Rowellyn Park Primary School	140	Seymour College	138	Seymour College
9:10 AM	107	Briagolong Primary School	106	Briagolong Primary School	161	Gleneagles Secondary
9:30 AM	151	Kingsley Park Primary School	121	Lyndhurst Primary School	119	Beaconsfield Upper Primary School
10:10 AM	116	Beaconsfield Primary School	120	Lyndhurst Primary School	5	Haileybury College
10:30 AM	164	Mornington Primary School	171	Koo Wee Rup Secondary College	149	Nathalia Secondary College
10:50 AM	160	Gleneagles Secondary	104	Maryborough Education Centre	51	Avenel Primary School
11:10 AM	305	Haileybury College	115	Beaconsfield Primary School	139	Seymour College
11:30 AM	126	Maiden Gully Primary School	127	Maiden Gully Primary School	135	St Margarets School and Berwick Grammar School
11:50 AM	157	Tyabb Primary School	125	Cockatoo Primary School	170	Koo Wee Rup Secondary College
12:50 PM	169	Laurimar Primary School	167	Laurimar Primary School	148	Toorak College
1:10 PM	145	Bonbeach Primary School	102	St Therese's Primary School	172	Ss Michael and John's Primary School
1:30 PM	134	St Margarets School and Berwick Grammar School	118	Beaconsfield Upper Primary School	129	Yarrawonga College P-12
1:50 PM	166	Flemington Primary School	146	Toorak College	141	Rossbourne School
2:10 PM	101	St Therese's Primary School	152	Ballarat Christian College	168	Laurimar Primary School
2:30 PM	128	Yarrawonga College P-12	147	Toorak College	130	Yarrawonga College P-12
3:20 PM	133	St Margarets School and Berwick Grammar School	109	Kyabram P-12 College	#N/A	#N/A
3:40 PM	103	St Therese's Primary School	165	Flemington Primary School	144	North Geelong Secondary College
4:00 PM	105	Ballarat Specialist School	142	Rossbourne School	s47	Broadford Secondary College
4:20 PM	136	Lucknow Primary School	143	Rossbourne School	s48	Broadford Secondary College
4:40 PM	173	Nelson Park School	154	Emerald Secondary College	131	Mount Beauty Secondary College

HPV, EEV AND TRY-ATHLON ENDURANCE TRIAL REGULATIONS

1. SPIRIT OF COMPETITION

The Energy Breakthrough Trial presents a unique opportunity for students to extend their learning experience beyond the boundaries of formal education. The following competition regulations have been framed so that the efforts and experiences of all participants are maximised, to be bound only by the constraints of safety and the spirit of healthy, but friendly competition.

2. ELIGIBILITY

2.1 Make-up of Teams

Teams will consist of the following numbers of competitors:

- Human Powered Vehicle Primary - 6 minimum – 10 maximum
- Human Powered Vehicle Secondary - 6 minimum – 8 maximum
- Energy Efficient Vehicle – 6 minimum - 8 maximum

2.1.1 Gender balance

- Except for Open Class teams and all female teams, a minimum of 50 per cent of the competitors in any one team shall be female.
- Gender ratio in Open Class teams is free.

2.2 Registered Riders

- Only registered team riders shall take part in the trial, however rider changes can be made up to the start of the endurance trial. (See Section 2.6).
- Emergency riders are encouraged to participate in the practice session to ensure they are familiar with the track and the vehicle.

2.3 Team Member Participation

- Team managers must ensure that every nominated team member participates as a driver.
- Managers are required to keep a log of rider track time, which can be checked by officials investigating incidents.

2.4 Age of Drivers

- Drivers of Energy Efficient Vehicles shall be at least 14 years of age, unless special prior approval is provided by organisers.

2.5 Identification

- All competitors must have official identification, which must be shown on request during the trial.

2.6 Rider Substitution

- Sick or injured riders may be replaced prior to the start of the trial by a registered reserve rider of the same gender. Riders will not be substituted after the start of the trial.
- This substitution will require the identification wristband of the replaced rider to be handed to the Administration Centre and a new identification issued to the reserve rider.

3. RIDER ATTIRE

3.1 Fit and Adjustment

- All vehicle occupants shall wear the following safety attire correctly fitted and adjusted at all times the vehicle is on the track during practice and the trial.

3.1.1 Helmet

- For human powered vehicles and pedal/electric hybrid vehicles, minimum requirement is a bicycle helmet approved to AS 2063, AS 1698 or ECE 22.05.
- For petrol-powered or electric-only Energy Efficient Vehicles, requirement is a motor cycle helmet approved to either AS 1698 or ECE 22.05.

3.1.2 Eye Protection

- Shatterproof glasses, goggles or a helmet visor must be worn at all times.
- Provision must be made for the lights on period overnight.
- Full faced helmets must have the visor down at all times unless the rider is wearing other eye protection.

3.1.3 Gloves

- Strong material BMX or motor-cross type gloves preferred.

3.1.4 Shoes

- Full foot coverage, sandals not permitted.

3.1.5 MP3 players

- The use of MP3 players or similar music/entertainment devices by riders is **NOT** permitted during trial or practice sessions.

3.1.6 Video cameras

- Small video cameras (eg. GoPro) are allowed as long as they are not attached to the rider's helmet and do not pose any safety risk. Camera's must not be mounted to the outside of the vehicle silhouette when viewed from the front

3.1.7 Clothing

Human Powered Vehicles:

- Minimum coverage of shoulders, upper body and mid-thigh e.g.: shorts and T-shirt; or cycling knicks and jersey.
- **HPV Note:** Sleeveless triathlon skin suits, sleeveless cycling jerseys, sleeveless t-shirts, tank tops or singlets are not permissible.

Electric Powered Energy Efficient Vehicles

- Riders of pedal/electric hybrid vehicles may choose to comply with the Human Powered Vehicle clothing rules.
- Riders of electric-only vehicles must comply with the requirements for liquid fuelled vehicles below.
- Teams that have battery power must provide a pair of full cover gloves and a pair of protective goggles for anyone handling batteries.

Liquid fuelled Energy Efficient Vehicles

- All competitors shall wear overalls or clothes that cover and are neat fitting from ankle to wrist to neck.

- Fire retardant material is advised and light fabric/disposable overalls are not permitted
- It is not permissible for drivers of fuel powered vehicles to 'dress down' when their fuel is used up.

4. SCRUTINEERING

4.1 Compulsory

Scrutineering is compulsory for all vehicles and teams, to ensure compliance with vehicle specifications and safety requirements.

4.2 Before track

Before entering onto the track for practice, all vehicles must be scrutineered for safety.

Scrutineers can refuse permission to enter the track for any safety reason.

4.3 Subsequent scrutineering

All vehicles will also be inspected at random during the trial for operation of safety items or when the vehicle is involved in a track incident. (See Section 7.11).

5. TRAFFIC LIGHTS AND SIGNALS

All competitors shall understand the meaning of the following traffic signals/flag signals:

Green Light or Flag

- The track is clear for competition.

Yellow Light or Flag

- **A sign of danger or track obstruction in the vicinity of the marshal point.**
- Riders are required to stop racing, slow and pass the point of danger at a significantly reduced speed (at or below 20 kph) using extreme caution
- Riders must not resume competition until they are well clear of the danger and until they reach the vicinity of the next marshal point displaying a Green Light or Flag.

Red Light or Flag

- **An indication of extreme danger.**
- All vehicles shall come to an **immediate** stop.
- Racing has ceased.
- Riders must follow the directions of the Clerk of Course and flag marshals.

Blue Flag

- Is an indicator that a faster vehicle is positioned close to you. Competitors shown the blue flag must hold their line to allow overtaking.

6. Start, Finish and Break

6.1 Pre-Race Briefing

All Team Managers must attend the pre-race briefing by the Clerk of Course and Race Director.

6.2 Lap Counters

It is the Team Manager's responsibility to ensure that:

- a transponder is picked up and correctly fitted to the vehicle
- the transponder is working at all times

- the transponder is returned to the Administration Centre at the end of the trial.

6.3 Grid Assembly

The Clerk of Course, in conjunction with the event committee, will allocate and advertise starting grid positions following the practice session.

Vehicles will be called to the starting grid assembly area at least 30 minutes prior to the official start.

If a vehicle is not on the grid within 15 minutes of the scheduled start time, officials reserve the right to place the vehicle at the rear of the grid.

Vehicles in the first 20 grid positions will be assembled according to the official grid positions. Thereafter teams will be assembled in groups of ten where exact starting position is less critical (ie. 20 – 30, 30 – 40, 40 – 50, 50 – 60, 60 – 70, etc).

6.4 Trial Start

The trial will be started with the drop of the National flag.

6.5 Trial Finish

All trials will conclude with the display of the black and white chequered flag,

- 24 hours after the start for the secondary HPV and Energy Efficient Vehicle teams.
- 14 hours of competition for the HPV Class A teams.

6.6 Class A Compulsory Break

6.6.1 Primary break

All HPV A vehicles will leave the track nominally from the specified time on Friday evening and resume their trial at the specified time on Saturday.

6.6.2 Rejoining the trial

The restart of the HPV A trial will be from pit lane and under the direction of the Clerk of Course.

7. TRACK CONDUCT

7.1 Speed Limit

Speedometers are mandatory and ALL competing vehicles shall observe a maximum speed of 60 kilometres per hour during practice and the trial, and 10kph in pit lane.

Vehicles detected exceeding 60km/h at any point will have the lap immediately voided. Voided laps will be displayed on the results display system but not counted towards a teams total.

7.2 Blue Line

A blue line has been painted on the track.

Vehicles must keep to the **left** of the track, on the inside of the BLUE line, unless overtaking another vehicle.

7.3 Seatbelts

All vehicle occupants shall wear a correctly adjusted seatbelt or harness when on the track during practice and the trial.

See section 4.6.3 of the Vehicle Specifications regarding correct adjustment of seat belts.

7.4 Injured Riders

The Clerk of Course, Track marshals and event officials monitor the trial and where necessary will call for assistance from Medical and Emergency Services to attend to injured riders.

7.5 Right of Way

Competing vehicles have right of way over disabled vehicles that need to be recovered and returned to the pit area.

7.6 Direction of Travel

Under no circumstances is a vehicle to be driven or pushed on the track in the opposite direction to racing.

7.7 Overtaking

Vehicles should overtake on the outside, to the right of the vehicle being overtaken.

Riders must not change lanes without checking their mirrors to make sure it is safe to do so.

It is the responsibility of the overtaking (faster) vehicle to ensure that the overtaking move is carried out without endangering other competitors.

Cutting in, deliberate blocking or leaving insufficient clearance will be penalised.

7.8 Vehicle Recovery

If a vehicle breaks down, the track marshals will report the incident and the team will be informed.

It is the responsibility of the team to recover their vehicle.

If a team is unable to safely recover their vehicle they can request assistance from the Clerk of Course and event officials.

7.9 Vehicle Lighting

Front lights as required by vehicle specifications shall be illuminated during the hours of darkness as directed by the Clerk of Course.

Rear lights as specified are to be turned on steady mode during all on track activities

Riders must stop in the pits as soon as possible to rectify any inoperable or insecure lights.

7.10 Lighting Batteries

Batteries used solely for lighting may be charged and/or recharged and/or replaced as required.

7.11 Track Incidents

All vehicles involved in significant crashes, rollovers etc, are to be removed from the track by marshals only and the barriers quickly restored to trial condition.

All vehicles involved in rollovers or significant crashes must have a "Return to Pits" sticker applied and may then be ridden back to the pits. Inspection in the pits by a Marshal is compulsory before re-joining the trial.

After returning to the pits the rider will NOT be allowed to ride again for at least ONE hour. During this time team managers must monitor the riders' condition, and if in doubt take the rider to the Trackside Medical Centre

If a vehicle is unable to continue because it is damaged or the rider is unable to ride then the vehicle may be recovered by the team for repair. Teams unable to recover their own vehicle can request assistance.

Riders who are unable to ride their vehicle back to the pits should be taken to the Trackside Medical Centre to be assessed and they must be cleared by the medical team before being allowed to ride again.

7.12 Emergency Vehicles

When emergency vehicles are on the track it displays flashing yellow lights which indicates extreme danger in the same manner as corner yellow lights/flags.

Riders must slow, use extreme caution, must not overtake other competitors and pass when directed by the officials.

8. PIT PROCEDURE

8.1 The Pit Areas

- All pit sites must be set-up as per the direction of Event Officials.
- Each team in the HPV, EEV and Try-athlon endurance trials will be allocated a site in the pit area, except where schools with three entries in a category will be required to utilise two pits sites.
- All pit sites are numbered and are a minimum of 2.8 metres wide by 2.0 metres deep.
- Where possible, pit numbers are the same as the team number.
- All teams must leave approx 1 metre clearance area in front of their pit site for rider changeovers and for other teams to have line of sight of the track and pit lane.
- [Closed shoes must be worn in pit lane.](#)
- There is no existing shelter in the Pit areas.
Teams are encouraged to erect a small tent, or arrange to share a tent with another team. Teams are encouraged to erect a team or school banner in their designated pit area(s) including team numbers. A banner about two by one metres would be ideal.
- HPV A teams are required to share their pit spaces - but not tools and resources - with Try-athlon teams for their Friday night Try-athlon Practice session.
- No vehicles or trailers will be allowed in the Try-athlon pit areas.

8.2 Speed in Pits

[Maximum speed in the pit area is 10 km/h.](#)

8.3 Direction of Travel in Pits

Under no circumstances shall a vehicle enter the pit area via the pit exit lane.

8.4 Driver Change-Over

All driver and passenger changes shall occur in the designated area adjacent to each team's pit.

8.5 Stopping in Pits

8.5.1 Brakes only

Vehicles shall come to a halt in the driver change lane under the effect of the vehicle's own braking system.

Stopping with the assistance of others is not permitted.

8.5.2 Full stop

Vehicles shall be stationary prior to unfastening seatbelts or harness.

8.5.3 Riders/Drivers

Driver refreshments and adjustments to clothing etc. shall only be effected when the vehicle is stationary in the pit area.

8.5.4 Pit Crew

A maximum of three students and one supervising adult, in addition to the incoming and outgoing riders, shall attend a vehicle in the pit lane at driver change-over.

The four designated people from each team attending the vehicle in pit lane are encouraged to wear a green reflective vest and must wear enclosed shoes.

8.6 Pit Lanes

Pit entry and exit lanes shall be kept clear at all times.

8.7 Pit Crew Communications

- The use of radio communication between rider and pit crew is permitted provided operating the unit does not interfere with the rider's control of the vehicle.
- The use of notice boards for communication between the rider and the pit crew are permitted.

However, such notice boards and their use shall comply with the following:

- they must be held and displayed by one person only at a time
- they must be held so they do not go beyond the line of pit lane barriers.

8.8 Major Repairs

- Major repairs including welding and grinding equipment must NOT be carried out in the pit lane. The pit lane includes a team's tent adjacent to the track.
- These repairs must be carried out in the vicinity of the repair container.

8.9 Stationary Vehicles

In pit or driver change lanes, stationary vehicles shall give way to vehicles proceeding along these lanes.

8.10 Removal of Components

Redundant, superfluous and/or damaged components of substantial mass i.e. greater than 0.5 kg, may not be removed from a vehicle except with the permission of the Clerk of Course. At the discretion of the Clerk of Course, the vehicle may be required to carry ballast. Teams may not substitute or replace power sources or strip the vehicle below its starting weight after the commencement of the event.

8.11 Vehicle Restarts

Vehicles that have been involved in a track incident and received a Return to Pits sticker cannot restart until a [Pit Marshal](#) has checked the vehicle is safe to continue and removed the sticker.

9. FUEL USE AND RECHARGING OF BATTERIES:

9.1 Fuel Burning Energy Efficient Vehicles

In accordance with Section 1.4.2 of the EEV specifications, fuel burning entries will receive a single allocation of fuel.

9.2 Amounts of Fuel Allocated

- EEV – 3 litres

9.3 Sealing of Fuel Tanks

All fuel burning entries MUST present for the fuel-up with the tank empty. Vehicles will be fuelled with their full allocation of fuel and the tank sealed prior to the start of the trial.

9.4 Batteries

At scrutineering teams using batteries are required to present all of their battery allocation for identification marking.

All batteries must have manufacturers labels including details of battery type displayed.

Batteries must be labelled with the school name [and located in the recharging container when not being used on a vehicle.](#)

9.5 Battery Recharging – process and Procedure

The onus is on the teams to use safe and reliable battery chargers.

Teams will start with fully charged batteries as the charging area will not open until one hour after the trial start. After which, there is no limit placed on the amount of time that batteries can be charged. All recharging is to be conducted in a designated area provided by the event organisers, and under supervision, to ensure charging is carried out in a safe manner.

Any team found to be charging batteries not in the designated area will be penalised.

All battery chargers must be electrically tested and tagged. The chargers must also be presented at the battery check on Saturday for an extra Energy Breakthrough tag to be applied. Only approved tagged chargers can be used.

Battery chargers must be of a commercially available type. The physical dimensions of the charger must not exceed 30cm x 30cm x 30cm.

Bare connections and alligator clips are strictly forbidden. All connections must be made using a properly insulated electrical connector. Anderson plugs are the preferred type of connector.

Only one battery pack may be charged at a time. A battery pack is defined as the usual amount of batteries required to run the vehicle.

Teams will be provided with one power outlet in the charging area, which will be fitted with a digital readout. Outlets are restricted to 4 amps (fused) or 720W whichever is the lower and officials will disconnect chargers drawing higher amp readings and notify the team.

10. TRIAL POINT SCORING

The vehicle completing the most number of laps in each class in the trial period scores the maximum 50 points.

Other vehicles in each class score points for the number of laps completed in proportion to the number of laps.

For example, say team AA in a particular class travels the greatest distance, 200 laps, and team BB in the same class travels 160 laps.

Points scored are as follows:

Team AA:

200 laps = 50 points

Team BB:

160 laps $50 \times \frac{160}{200} = 40$ points

11. INFRINGEMENTS

11.1 Vehicle Design

Vehicles which are considered safe but DO NOT comply with key elements of vehicle specifications may be given permission to start the trial with a penalty.

This penalty can be up to 50 laps and will be applied by the event officials.

11.2 Reporting of Incidents

[Teams may report track incidents or infringements of these competition rules to the Clerk of Course or Pit Marshals who will investigate and act accordingly.](#)

If teams wish to proceed with an official complaint they will be provided the appropriate documentation.

11.3 Penalties

A team that breaches any trial regulation including the spirit of competition, will be notified that they are under investigation for an infringement of the competition rules.

[The Clerk of Course and event officials](#) will review the incident and apply a penalty, which they consider is consistent with the severity and intent of the infringement.

Incident reviews will be conducted as soon as practical, but in any case will be resolved before the end of the endurance trial.

Penalties may take the form of:

- A warning.
- A “stop and go” penalty.
- A time penalty.
- 50 lap penalty.
- Disqualification of a rider.
- Exclusion from trial results.
- Withdrawal from competition.



CIRCUIT LENGTHS
 TRACK 1 - 1.58 km
 VICROADS - 1.11 km

KEY

- Assembly Point
- Marshall Point & Number
- Track Direction
- Start/Finish
- Pushcart Changeover Point
- Food & Refreshments
- Toilets
- Showers
- Camping Area
- First Aid
- Repair Station
- Recharge Station
- Parking Area
- On-site Supermarket
- Hospitality Marquee
- Wrist Banding Station
- Track 1 Stage
- VicRoads Stage
- Road Closure

ENERGY BREAKTHROUGH SITE