

# Chipping Sodbury Cars at National Finals Greenpower 2013

2013 has been a busy year for Chipping Sodbury School's Greenpower project, with new cars being designed, built during the Monday evening sessions and raced at events around the country. Greenpower is an engineering initiative where teams of pupils (from year 7 through sixth form), parents and teachers work together to build their own electric race car, gaining vital engineering experience as well as skills of leadership and teamwork. All the pupils have been busy trying to get their car to achieve the best it possibly can with the help of technology provided such as virtual wind tunnels and CAD modelling systems. The competition: the best teams and cars from over 200 schools situated all over the country as well as some entrants from companies, the USA and Poland.



There are 4 teams in Chipping Sodbury School: Rotary Racer, The Pod Movement, Chain Reaction and Alderley Express. Each team has been working hard throughout the year on their cars, and this paid off as every team managed to make the final this year (only 74 cars were racing at the final out of the hundreds of schools that take part). The final was held at Goodwood Motor Circuit on the 13<sup>th</sup> October, and it promised to be an exciting day.

The conditions on the day were far from pleasant, with rain making an untimely appearance in both the F24+ (the 90 minute sprint race for ages 16-25) and the F24 (the 4 hour endurance race for ages 11-16) races. However, all four teams kept in high spirits and battled on through the conditions.



All four cars passed scrutineering (where your car is tested to make sure it is safe) and were soon ready for the races to start. The F24+ race came first where only 1 driver is needed with 2 pairs of batteries (each battery has 12V) allowed for the duration of the race. Only two teams from Chipping Sodbury currently compete in this race : The Pod Movement (with the ByPod and Tpod cars) and Rotary Racer. ByPod were entering this race with a chance

at a championship podium position after their fantastic racing throughout the season had gained them 18 points.

Unfortunately, during this race, the weather conditions took their toll on Rotary Racer and the driver had to swerve round a corner, puncturing a tire. This caused the car to spin off the track and puncture 2 of the 3 remaining tires on the rumble strip as well as running side-on into a wooden wall (later to be found to have caused the foam side of the car to move slightly). After this, the Rotary Racer F24+ team sportingly drew out of the race to save the car for the F24 team later on in the day.



But The Pod Movement continued to fly around the track, with both ByPod and Tpod proving to be competition for the 31 cars that were around on the day which included the fast Jet and Dougal and many corporate cars. Excellent pitstops (with help of TPM's F24 team) kept the cars in high positions, leading to them finishing in 3<sup>rd</sup> (ByPod) and 12<sup>th</sup> (Tpod) positions; a fantastic result to end the season. These finished helped add to the championship positions with ByPod coming 3<sup>rd</sup>, Rotary Racer 8<sup>th</sup> and Tpod 16<sup>th</sup> out of the 31 cars that took part. Congratulations to everyone involved!



After this exciting race, all of the teams were eager to get the F24 race started. After a quick parade to show off the car, and a prize giving for the F24+ teams, the race was under way! It definitely proved to be a challenge of 'the survival of the fittest' as team after team were brought into the paddocks due to the wet conditions hindering their cars.

Nonetheless, all Chipping Sodbury teams continued in high spirits, showing great determination throughout the 4 hours. Five pitstops were taken for each team, changing drivers each time and using 3 sets



of batteries throughout the race.

Rotary Racer had remained in a consistent 4<sup>th</sup> position throughout the first half of the race, but managed to climb up to 1<sup>st</sup> position in the last couple of hours as the number one car was brought into the paddocks due to an electronic failure. The team were elated as they managed to cross the finish line to gain National Champion status for the third year in a row, completing 118 miles despite the rainy weather!



Tpod also battled through, jumping through many different positions throughout the day to finally pass over the finish line in 45<sup>th</sup> position, completing 76.8 miles. Chain Reaction and Alderley Express were virtually neck and neck the entire race, crossing the finish line with just a few minutes between them to gain 34<sup>th</sup> and 35<sup>th</sup> finishes respectively, both finishing having driven over 80 miles during the race.

All of the teams were thrilled to have finished the race and hope to come back next year for a repeat performance. New car design/builds and modifications will be taking place in the DT rooms during the winter by the teams, and hopefully the Chipping Sodbury cars will continue to prove high competition for all the other Greenpower teams nationally in 2014.

A huge thank you to Greenpower for organising the day, and to Mr McMorro for giving up his time each week for the teams to work on their car. Also many thanks to all of the sponsors who provide money and other support to allow us to compete in this national challenge. Finally, a massive congratulations to each of the students and parents for their success on the day, each team should be incredibly proud of what they've achieved!

Good luck to all the students who are leaving this year, 4 of whom are going into engineering at university/ in an apprenticeship!  
Gareth Barnaby, Dan Dando, Ben Miller, Matt Hunter and Gavin Woodruff.

