

Young people charged up

The Noosa Electric Vehicle Expo this Sunday will showcase the important role that young people are playing in developing cutting edge sustainable transport design and innovation. "Noosa is really fortunate to be hosting not one but three great examples where young people are leading the way," said Expo Coordinator Vivien Griffin.

"We have Team Arrow and QUT Motorsports from Brisbane, and home-grown innovation from Matthew Flinders Anglican College students," she said. "I am hoping that their examples will inspire STEM students from our high schools to think about their future direction."

Team Arrow Racing Association are a Brisbane-based team who design and build a solar-racing vehicle to compete in the grueling 3000 kilometre Bridgestone World Solar Challenge from Darwin to Adelaide. They first entered the World Solar Challenge in 2013 with their single-seat solar car Arrow1 and since then have competed in both the 2015 and 2017 races. 2015 saw Arrow1 place eighth, the highest placing Australian team.

Competitors in the challenge face a range of complex issues, such as finding a way to deliver optimal efficiency from the vehicle and complex power-electronics systems, all while dealing with the harsh Australian outback conditions. The team has also competed internationally, including the 2015 Abu Dhabi Solar Challenge, where they were placed fifth.

QUT Motorsport is a student-run motorsport team that designs, engineers, builds and markets a single seat electric race car for the Formula SAE-A competition. It incorporates students from a range of disciplines such as engineering, software, business, IT and many more.

QUT Motorsport paves the way for future



Team Arrow finishes the Solar Challenge.

careers in industry. Its members get a chance to apply and develop the skills they have acquired at university in a real-world project. The team is a dedicated group of people who are passionate and committed to producing the best, most innovative solutions and refining their expertise through the design and fabrication of a Formula SAE car.

At the other end of the spectrum, Matthew Flinders Anglican College students have embarked on a project to convert an aged diesel 4WD vehicle to electric. (See separate article.) The Flinders project is the first of its kind in Australia, with students aiming to play their

part in planning for environmentally sustainable transport options in the future.

Flinders Secondary Design and Technologies teacher, Mr Mike King said there was a real buzz during the car conversion lessons. "Students are keen to work to a high standard and learn about vehicle restoration processes."

Electric vehicles have emerged and proved themselves as one of the best options to transition the world to a sustainable transport future. However, electric vehicles are still unaffordable for many people and uptake of electric vehicles in Australia has been very low compared to other countries around the world.



Team Arrow.

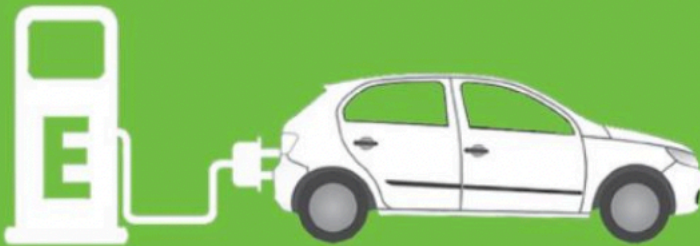


QUT Motorsport.

The students at Flinders want to help provide solutions to this problem.

The free Noosa Electric Vehicle Expo will be happening on Sunday 21 March from 10am to 2pm at the Noosa Transit Centre car park, Lanyana Way, Noosa Junction. Further information at noosaevepo.com.au.

NOOSA ELECTRIC VEHICLE EXPO



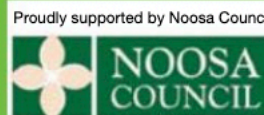
Sunday 21 March 2021
10am to 2pm

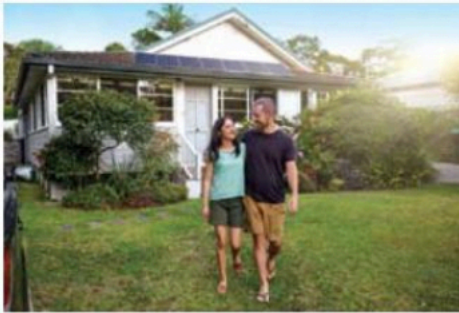
Transit Centre Car Park,
Lanyana Way,
Noosa Junction

FREE ENTRY



 www.noosaevepo.com.au





In the lead up to Earth Hour March 27, Noosa Council is facilitating Climate Week, an opportunity to showcase the positive action that is being taken across the Shire to reduce emissions and adapt to the impacts of climate change across the Noosa Shire.

SUNDAY 21 MARCH

10am - 2pm | E-Vehicle Expo | Noosa Junction
Presented by ZEN Inc

3 - 5pm | Kabi Kabi Wall
BOOKED OUT
Presented by Noosa Environmental Education Hub

MONDAY 22 MARCH

3:30 - 5pm | Plastic Free Noosa Clean Up Event | Peregrin Beach
Presented by Plastic Free Noosa

5:30 - 7:30pm | Green Drinks | Noosa Jungle & Co Cafe, Shop 3/ 19-21 Sunshine Beach Rd, Noosa Heads
RSVP: sheelinecoates@gmail.com or 0401 722 662

TUESDAY 23 MARCH

10am - 12pm | Community Permaculture Gardens
BOOKED OUT
Presented by Permaculture Noosa and Noosa Council

11am - 3pm | Free Energy Bill Comparisons and Solar Consultations | Noosa Village Shopping Centre
Presented by Australian Energy Foundation

3:30pm | Circular Economy workshop | Noosa Parks Association, 15 Wallace Dr, Noosaville
Presented by SCEC

3:30 - 5pm | Plastic Free Noosa Clean Up Event | Sunshine Beach
Presented by Plastic Free Noosa

5 - 7pm | Fundamentals of Landcare
BOOKED OUT
Presented by Noosa Landcare

5:30 - 7:30pm | AEF Workshop: Saving \$ and reducing emissions at home | Cooroy RSL
Presented by Australian Energy Foundation

WEDNESDAY 24 MARCH

11am - 3pm | Free Energy Bill Comparisons and Solar Consultations | Noosa Village Shopping Centre
Presented by Australian Energy Foundation

3:30 - 5pm | Plastic Free Noosa Clean Up Event | Noosa Junction
Presented by Plastic Free Noosa

4 - 4:45pm | Paint a Pot
BOOKED OUT
Presented by Noosa Library

5:30 - 7:30pm | Reducing Energy Costs for Businesses Forum | Belmondos Organic Market, 59 Rene St Noosaville
Light refreshments will be served. Bookings essential.
Presented by ZEN Inc

THURSDAY 25 MARCH

9am - 11am | Noosa Landfill Tour | Meet at the J
Presented by Noosa Council

10:30am - 12pm | Climate Advocacy Workshop | Noosa Parks Association, 15 Wallace Dr, Noosaville
Presented by SCEC

3:30 - 5pm | Plastic Free Noosa Clean Up Event | Hastings Street
Presented by Plastic Free Noosa

4 - 4:45pm | Paint a pot
BOOKED OUT
Presented by Noosa Library Service

5:30 - 7:30pm | Making your superannuation work for you and the planet | Noosa Leisure Centre
Presented by Dr John Cronin and Noosa Council

FRIDAY 26 MARCH

11:30 - 1pm | ClimateClever workshop | 19 Venture Drive, Noosaville Cost | \$15 includes 1 year free access to the ClimateClever app.
Presented by SCEC

6:30 - 8pm | 2040 Movie
BOOKED OUT
Presented by Noosa Council

SATURDAY 27 MARCH

8 - 11am | Fundamentals of Landcare
BOOKED OUT
Presented by Noosa Landcare

1 - 2.30pm | Clapstix Workshop | Noosa Regional Gallery, Tewantin

2 - 6pm | Climate Week Concert | BYO Picnic Lions Park, Gympie Terrace, Noosaville

SUNDAY 28 MARCH

8.30 - 11am | Trees for Climate | Girraween Sports Complex

For more info and tickets, head to Council's website: noosa.qld.gov.au

EVERY DAY FROM MONDAY 22 - FRIDAY 26 MARCH

All Day | The Greenhouse Art Installation | Gympie Terrace
Presented by Yanni Van Zijl and Pam Walpole

In-kind - A volunteer's perspective on Climate Change | Noosaville Library
Presented by NICA





Josh Poulton (squatting) works on the wiring loom while Harry Urbahn works on the front door. Picture: ROB MACCOLL

Electric 4WD

By Phil Jarratt

The industrial technology students at Matthew Flinders Anglican College stood around and watched as the beaten-up old Series 3 diesel Land Rover was lowered off the trailer.

"Are you serious?" asked one. "We get to spend the next six months taking apart a real car and putting it back together?" The teacher nodded. "Wow," said another student, "sure beats making a table."

Yep, this is school, Jim, but not as we know it.

In fact the Buderim college's electric vehicle conversion project, which will be featured in Noosa at the EV Expo on Sunday, is an Australian first and is leading a global push back into high schools for learning about renewables in innovative ways. Flinders' head of innovation and learning, Ed Wright, explains: "I started my teaching career in the UK in the early 2000s when schools were being inundated with solar car projects, but then they seemed to disappear off the radar as they got more expensive, and reappeared only at some universities. Now, as the need to embrace renewables becomes greater, the interest is back, and we're hopeful that this project will become a model for schools around Australia."

About 20 Year 11 and 12 students are now involved in the ambitious upcycling project, and it has already generated a lot of community interest, with Ken Mills Toyota signing on as gold sponsor, which means that the Series 3 Land Rover will henceforth be known simply as an "old 4WD". And therein lies a lesson in marketing for the group. Says Ed Wright: "When we started researching the easiest vehicle to lift a motor out of, it really got down to a VW Beetle or a Land Rover, where basically



Head of Learning and Innovation Ed Wright with the "old 4WD".

you undo four bolts and lift it out. We weren't anticipating a sponsorship from a rival vehicle brand, but it's great because it's another real-world problem and the students have to find a solution. And, I have to add, the sponsor has been wonderful about it."

Turn to page 22

EQ

Electric now has a Mercedes.

The EQ is here.

wheels
CAR OF THE YEAR
2020
WINNER

12436106 SM12-21

From page 21

So zip! This reporter has the message loud and clear. While the project began life last year as part of the senior Industrial Technology Skills curriculum with the simple mission of removing an engine and replacing it with an electric motor and batteries that can be recharged from the school's solar panels, it has grown organically to encompass a wide range of real-world skills (including branding) and a growing involvement of students from both the secondary and primary schools.

At the project launch, principal Stuart Meade said: "We recognise value in this sort of real-world project. It enables our students at Flinders to have ownership over their learning and to employ 21st century skills such as creativity, collaboration and critical thinking." As it turns out, this was something of an understatement.

When the project team from the college's Innovations Club realised how much it would cost to buy an "old 4WD" and what the price of batteries was (\$3,000 and the project needs seven), they sat down and drew up a sponsorship pitch and a marketing plan that would deliver on the promise. Enter Ken Mills Toyota, helped along by the fact that dealer principal Brett Mills is on the school board, but Mr Mills didn't get to the top of the motor trade by being a soft touch. Other Sunshine Coast businesses have since also pledged support.

Next the team of teenagers put together a comprehensive business plan and pitched the school board for a business loan, which was granted just in the last couple of weeks. "They're going to have to sell a lot of sausages at Bunnings to pay it back", quipped project mentor Ed Wright, but the teacher can barely conceal his pride when he talks about the pas-

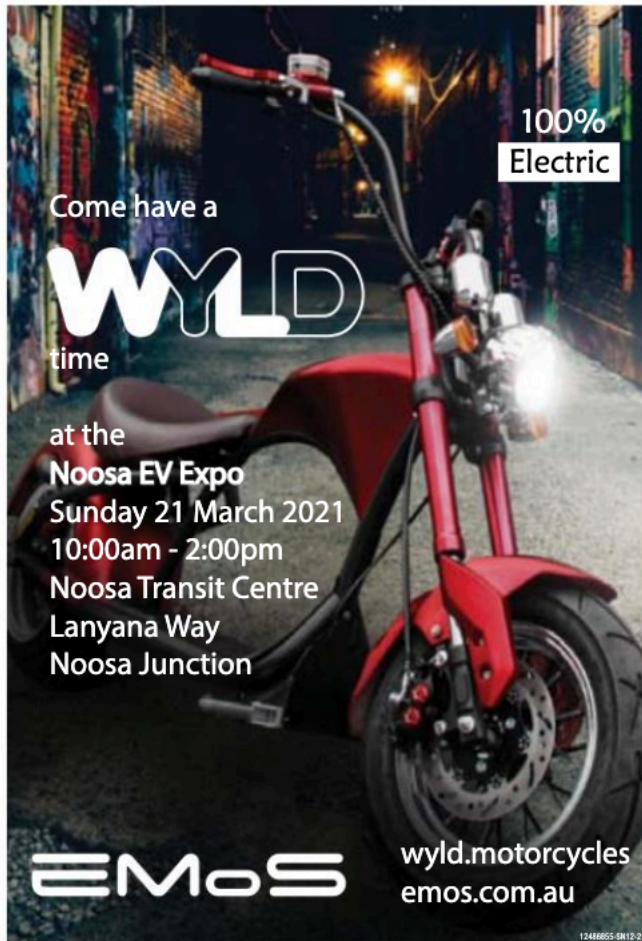
sion and energy the Flinders' students have brought to the project.

He says: "I think the way we approach innovation and learning at Flinders is a bit different to other schools. Part of the joy of this project is that the approach is whole of school. We're trying to connect as many students as we can across as many disciplines as we can. Although the core conversion is happening within the technology department, we have students working on designing a logo for the car, so that involves digital technology and computer coding for the dashboard. Down the track we'll involve the primary school kids in some parts of the design of the interior of the vehicle. Other groups are working on purposing the vehicle once it's finished, whether it will be kitted out as a coffee cart down at the rugby field, or whether it's used to tow the school barbeque to events. And of course, the marketing and

business strategizing is ongoing.

"The STEM (science, technology, engineering, mathematics) component is that at Flinders we want students to be able to work with real world problems now so that they'll be better equipped at finding solutions later on. But we see it as going beyond the STEM idea. Our experience is that the best projects are ones that excite students at all levels, from an industrial tech level to computer design to sourcing sponsorships and coming up with marketing campaigns. It's an organic approach and to be honest, we don't really know where it's going. I guess that's why everyone – students, teachers and our community supporters – finds it so exciting."

Because the "old 4WD" is currently in pieces, the Matthew Flinders team won't be bringing it to the EV Expo on Sunday, but they have video and photos of the work so far.



100% Electric

Come have a **WYLD** time

at the **Noosa EV Expo**
Sunday 21 March 2021
10:00am - 2:00pm
Noosa Transit Centre
Lanyana Way
Noosa Junction

EMoS **wyld.motorcycles**
emos.com.au


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Image for the MFAC EV Conversion was created by Zoe Guard in Y9, not the final colours. Picture: SUPPLIED



Thomas Funnell (left) and Cal Sutton reassemble the grill.



Reducing Energy Costs for Business

Want to know how Noosa Shire businesses save 33 – 100% of their power bill?

Free forum on energy efficiency and solar PV
Wed. 24 March, 2021 @ 5.30pm – 7.30pm
 Belmondos in Rene St., Noosaville

A PANEL WILL ALSO ANSWER YOUR QUESTIONS

Bookings essential @
<https://www.zeroemissionsnoosa.com.au/>
 Select the green button – free event.

For more information email info@zeroemissionsnoosa.com.au

This event is proudly supported by Noosa Council. This event is COVID compliant. Please do not attend if you have COVID symptoms.

0 ZERO EMISSIONS NOOSA

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Noosa Climate Week



21-28 March 2021

NOOSA COUNCIL



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DID YOU KNOW?

The Trees for Tourism program helps protect Noosa's outstanding natural assets, contributing to making Noosa a truly sustainable destination. In partnership with local events, businesses and visitors we plant trees for land rehabilitation, carbon emission reduction, erosion mitigation and the protection and enhancement of Noosa's koala habitat.

Join us to TAKE ACTION for Climate Week

With your help, we'll be able to plant 500 additional trees, increasing our total to **2378 trees** planted since the program commenced in 2019.

Monday	Tuesday	Wednesday	Thursday	Friday
Plastic Free Noosa Community Clean-Ups				Trees for Tourism tree planting with Noosa & District Landcare Fri 26 March Limited spaces available
Peregian Beach Village Mon 22 March 3:30pm - 5:00pm Meet at Peregian Beach Hotel	Sunshine Beach Village Tue 23 March 3:30pm - 5:00pm Meet at Sunshine Beach Surf Lifesaving Club	Noosa Junction Wed 24 March 3:30pm - 5:00pm Meet at Village Bicycle	Noosa Heads/ Noosa Main Beach Thu 25 March 3:30pm - 5:00pm Meet at Noosa Visitor Information Centre	

These clean-ups will shine light on the importance of waste reduction and the circular economy, and will support the Trees for Tourism Initiative via community donations and Tourism Noosa funding.

If you want to support Trees for Tourism by joining one of our Climate Week clean-ups **RSVP to anita@plasticfreenoosa.org** or make a donation today at the Noosa Visitor Information Centre at 61 Hastings Street, Noosa Heads.

