aussie solar challenge

Roadworthiness Certificate

General

Builder	
Vehicle Identification Number	
Gross vehicle mass (with all seats occupied and ballast)	

The solar car must be designed and constructed so that it is fit for the purpose of:

- fast laps of a track
- two days of endurance driving on a track
- driving on public roads (with an appropriate permit).

Circle either YES or NO for each of the questions below.

Chassis

YES NO Is the vehicle chassis suitable for the Gross Vehicle Mass?

YES NO Is the vehicle chassis adequate to sustain the forces expected while driving on a track and on public roads?

Notes:

Occupant protection

YES NO Has the vehicle been designed and constructed so that parts such as the solar panel cannot detach while driving?

YES NO Are occupants enclosed in an occupant cell that will protect them from frontal impacts, side impacts and rollover impacts?

YES NO Do the safety belts comply with at least one of the following standards: UNECE Regulation 16, US FMVSS 571.209, SFI 16.1, SFI 16.5, SFI 16.6, FIA 8853-2016, FIA 8854/98, and do they have compliance markings?

YES NO Are the safety belt attachments to the vehicle adequately constructed and fit for purpose?

YES NO Are the safety belts and anchorage points, and the area in which they are located, free from any sharp edges or chafing risk?

Notes:

Suspension

YES NO Are all components of the vehicle suspension systems fit for purpose?

YES NO Are the suspension attachments to the vehicle fit for purpose?

YES NO Are critical components retained with fasteners that cannot come loose with vibration?

Notes:

Steering

YES NO Are all components of the steering system fit for purpose?

YES NO Are critical components retained with fasteners that cannot come loose with vibration?

Notes:

Brakes

Brake system requirements are based on UNECE Regulation 13-H.

YES NO Does the vehicle have independent service and secondary braking systems, each of which applies mechanical braking to the wheels?

YES NO Are shared components of the service and secondary braking systems amply dimensioned and ‘not liable to failure’?

YES NO Will the service and secondary braking systems stop the vehicle without it yawing?

YES NO Is the braking system fit for purpose?

Notes:

Wheel rims

YES NO Do the wheel rims have dimensions recommended by the tyre manufacturer?

YES NO Are the wheel rims, and their attachment to the vehicle, fit for purpose?

Notes:

Tyres

	Front	**Rear**
Make and model		
Size (e.g. 100/80R16)		
Load rating (index number and kg)		
Speed rating (letter		

and km/h)		

YES NO Are the tyres rated for the GVM and maximum speed of the vehicle?

YES NO Are the tyres fit for purpose?

Notes:

Stability

YES NO Has the car been designed and constructed so that it will have adequate dynamic stability at high speed and in crosswinds?

Notes:

Ventilation

YES NO Does the cabin have adequate ventilation and cooling for all occupants?

Notes:

Battery management

YES NO Does the vehicle have a battery management system that will ensure that the battery is operated within manufacturer’s limits at all times?

Notes:

Certification

I certify that the vehicle described in this document meets the minimum requirements indicated by the checklists contained in this document.

In my professional opinion, the vehicle has been constructed in accordance with sound engineering practice and is suitable to be driven on a track and on public roads as a participant in the 2021 Aussie Solar Challenge.

Name of certifier:

Qualifications:

Signature:

Date: