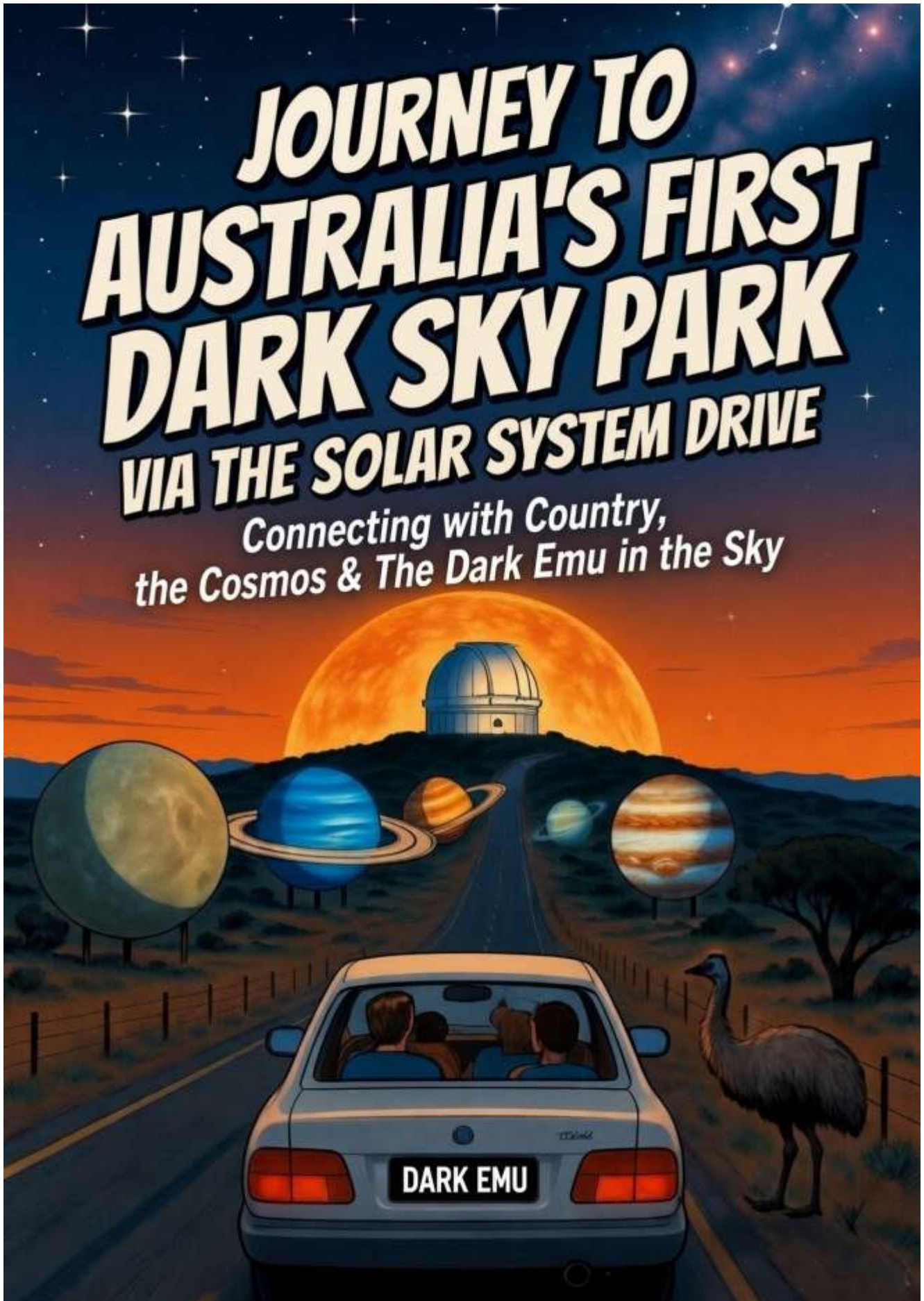




A Comic-Style Cosmic Adventure & Practical Guide

WELCOME TO THE JOURNEY

The Solar System Drive: Connecting with Country and the Cosmos on Gamilaraay Lands

"The land is the source of all life, and we are its custodians, not its owners."

The Solar System Drive (SSD) is the World's Largest Virtual Solar System Drive — an innovative educational and tourism initiative right here in New South Wales, Australia. Formally opened in 2008, it features scaled 3D billboards of the Sun and planets positioned along five scenic routes that converge at the Anglo-Australian Telescope (AAT) dome at Siding Spring Observatory, the heart of Australia's first International Dark Sky Park near Coonabarabran.

The billboards are precisely 38 million times smaller than reality, so the two-hour drive from Pluto to the Sun gives you a visceral sense of our solar system's immense scale within the Milky Way. The entire network spans over 600 kilometres of bitumen road across a vast area of approximately 20,000 square miles (50,000 square kilometres) of beautiful Central West and Northwest slopes country.

On your way to Coonabarabran and Australia's First Dark Sky Park and the AAT telescope at Siding Spring, you will start spotting the billboards — beginning with Pluto on the outer edges. We encourage you to find every planet, stop for photos, document your cosmic journey. It turns the drive from a mere transit into a memorable, educational adventure — more than a destination, a true journey to and from your holiday.



THE FIVE SCENIC ROUTES

The SSD has five main branches, all leading to the AAT Sun. Choose your path or combine them for a greater experience:

From the North (Queensland): via Moree and Narrabri — Bellata Pluto/Neptune, Pilliga Jupiter area.

From the East (Tamworth & New England): via Gunnedah (Neptune), Mullaley (Saturn), Emerald Hill (Jupiter).

From Sydney & Central Coast (Hunter/Merriwa): via Jerries Plains, Merriwa (Pluto), Coolah (Uranus), Binnaway (Saturn), Coonabarabran outskirts (Jupiter).

From Sydney & South Coast (Blue Mountains/Mudgee): via Mudgee, Gulgong/Birriwa (Pluto/Neptune/Uranus), Leadville (Saturn), Coolah (Jupiter).

From the South (Dubbo & Central West): via Gilgandra (Neptune), Tooraweenah (Uranus), Gulargambone (Saturn), Tooraweenah/Coolah (Jupiter) and Hickeys Falls (Yowie country!).

All routes are well-signposted with distinctive dark blue billboards. Fuel, toilets, and great country hospitality await in every town.

CONNECTING WITH COUNTRY

The Solar System Drive Travels Through Gamilaraay / Kamilaroi Country



The Solar System Drive traverses Kamilaroi Country (also spelled Gamilaraay or Gomeroi), the traditional lands of the Kamilaroi people, who have maintained a profound connection to these landscapes and skies for tens of thousands of years. This vast nation spans northern New South Wales and southern Queensland, encompassing all five SSD routes converging at Siding Spring Observatory.

As Australia's first International Dark Sky Park, the Warrumbungle region highlights the shared heritage of astronomy — blending modern science with ancient Kamilaroi knowledge of the stars. The Emu in the Sky (a dark constellation in the Milky Way) is a central motif in Kamilaroi lore, symbolising creation stories, navigation, and seasonal guidance — perfectly aligned with our SSD theme of exploring our solar system within the galaxy.

Many cultures carry stories of wild, hairy beings who guard the untamed places. In Manx folklore of the Isle of Man, the Fenodyree (or Phynnodderee) — the “hairy one” — was a powerful helper who threshed barns and moved stones in a single night. When offered clothes as payment (the symbol of civilized property), he recited a sorrowful rhyme and vanished forever from the “merry Glen of Rushen,” his former home in the free, shared world.

In the Pilliga and along the SSD routes, Gomeroi stories speak of the Hairy Man or Yowie — appointed by Mother Earth as protector and custodian of the forest “since time immemorial.” Modern sightings and local lore carry the same ethic: these beings watch over the land and withdraw when heavy disturbance breaks the ancient balance. At Hickeys Falls (between Uranus and Saturn on the A39 Newell Highway, Dubbo route), local indigenous knowledge tells that the Yowie is known in this area — a living echo of the same guardian archetype. Respect the wild places; the old stories live on.

The SSD is not just a drive — it is a modern Songline through ancient Country, where the stars above and the land below tell the same story of connection, custodianship, and wonder.

SPOT THE PLANETS — YOUR COSMIC CHECKLIST

38 million times smaller than reality • 2-hour drive Pluto → Sun • Document your journey!

PLUTO — The Dwarf Planet at the Edge of the Solar System



Locations (multi-billboard outer planet): Merriwa (Hunter route), Moree (North), Dubbo (South), Birriwa/Gulgong (Mudgee route), Tamworth (East). Search Google Maps: “Pluto Solar System Drive [town]”.

Type: Dwarf planet (reclassified 2006)

Size: 2,376 km diameter (~2/3 Moon)

Distance: 39.5 AU

Orbit: 248 Earth years

Discovered: 1930 by Clyde Tombaugh

Visited: New Horizons flyby 14 July 2015 (revealed heart-shaped Sputnik Planitia, possible subsurface ocean, 5 moons including Charon).

Fun Fact: Pluto is so small and distant that sunlight takes 5.5 hours to reach it. Its largest moon Charon is half its size — they dance around a common centre of gravity outside both bodies!

Area Vibes: At Merriwa (~800 people, est. 1830s) on Gamilaraay lands — important trade & ceremony country. Fuel, toilets, cafe available. Coolah Tops nearby for mountain lore (Butheroe people, King Togee stories).

NEPTUNE — The Windy Ice Giant



Locations: Dunedoo (Merriwa), Gunnedah (Tamworth — Red Chief / Gambu Ganuurrú country), Bellata (Moree), Gilgandra (Dubbo), Gulgong (Birriwa).

Type: Ice giant

Size: 49,244 km diameter

Distance: 30.1 AU

Orbit: 165 Earth years

Discovered: 1846 (predicted mathematically by Adams & Le Verrier, observed by Galle)

Visited: Voyager 2 flyby 1989 (Great Dark Spot, fastest winds in solar system ~2,400 km/h, Triton moon orbits backwards).

Fun Fact: Neptune was the first planet discovered by mathematical prediction rather than direct observation. It has the strongest winds in the solar system — supersonic!

Area Vibes: Gunnedah — home of the legendary Red Chief (Gambu Ganuurrú), Kamilaroi warrior leader of the late 1700s whose story of strategy, defence of his people, and law reform is told in Ion Idriess's classic. Red Chief Memorial honours this resilience. Warriors used stars for night guidance in battle and hunt.

URANUS — The Tilted Ice Giant



Locations: Coolah (Merriwa & Birriwa routes — Coolah Tops, Butheroe people), Nombi (Tamworth), Wee Waa (Moree), Tooraweenah (Dubbo — near Hickeys Falls Yowie country!), Ulan (Birriwa).

Type: Ice giant

Size: 50,724 km diameter

Distance: 19.2 AU

Orbit: 84 Earth years

Discovered: 1781 by William Herschel (first planet found with telescope)

Visited: Voyager 2 flyby 1986 (pale blue, extreme axial tilt of 98° — rolls on its side like a barrel, likely from ancient giant impact).

Fun Fact: Uranus is the only planet that “rolls” on its side. Its 27 moons are named after Shakespearean characters. It has faint rings and extreme seasons lasting 21 years each!

Area Vibes: Coolah & Coolah Tops — Kamilaroi mountain country with deep spiritual significance. King Togee (Butheroe clan leader, mid-1800s) formed alliances with settlers; his people mourned a settler’s death by vanishing into bush for three years — powerful story of intercultural bonds. Perfect for skywatching lore.

SATURN — The Jewel of the Solar System



Locations: Binnaway (Merriwa), Mullaley (Tamworth), Narrabri (Moree — home of Australia Telescope Compact Array), Gulargambone (Dubbo), Leadville (Birriwa).

Type: Gas giant

Size: 120,536 km diameter

Distance: 9.5 AU

Orbit: 29.5 Earth years

Known: since ancient times

Visited: Pioneer 11 (1979), Voyager 1 (1980), Voyager 2 (1981), Cassini-Huygens (1997–2017 — orbited, landed on Titan, revealed hexagonal north pole storm, Enceladus water plumes).

Fun Fact: Saturn is the least dense planet — it would float on water! Its magnificent rings are made of ice and rock, some as small as a grain of sand, others as big as a house. The Cassini mission ended in a fiery “Grand Finale” dive into the atmosphere in 2017.

Area Vibes: Narrabri — Astronomy Capital of Australia with the famous radio telescope array. Gulargambone & Goonoo Forest — Kamilaroi River country (Castlereagh River), “Goonoo” meaning place of abundance. River-based astronomy: stars reflected in water for seasonal timing.

JUPITER — The King of Planets & Guardian of the Asteroid Belt



Locations: Coonabarabran outskirts (Merriwa), Emerald Hill (Tamworth), Pilliga (Moree), Tooraweenah (Dubbo), Coolah (Birriwa).

Type: Gas giant

Size: 139,820 km diameter (largest planet, 11× Earth)

Distance: 5.2 AU

Orbit: 11.86 Earth years

Known: since ancient times

Visited: Pioneer 10 (1973), Pioneer 11 (1974), Voyager 1 & 2 (1979), Galileo (1995–2003 orbiter), Juno (2016–present — revealed Great Red Spot depth, polar cyclones, water on Europa).

Fun Fact: Jupiter has at least 95 moons! Its Great Red Spot is a storm larger than Earth that has raged for at least 400 years. It acts as a “cosmic vacuum cleaner” protecting inner planets from asteroids.

Area Vibes: Pilliga & Warrumbungle Mountains — heart of Kamilaroi Country. Volcanic peaks woven into creation stories and songlines representing ancestral beings. Seasonal camps, ceremonies, sky observation. The dark skies here echo ancient practices where elders taught navigation via constellations.

MARS — The Red Planet (Gateway to the Inner Solar System)



Location: Approaching Coonabarabran on most routes (exact billboard near Jupiter on some).

Type: Terrestrial (rocky)

Size: 6,779 km diameter

Distance: 1.52 AU

Orbit: 687 Earth days (1.88 years)

Known: since ancient times

Visited: Mariner 9 (1971 first orbiter), Viking 1 & 2 (1976 landers), Spirit & Opportunity rovers (2004–2018), Curiosity (2012–present), Perseverance (2021–present, collecting samples for return to Earth), plus orbiters from many nations.

Fun Fact: Mars has the tallest mountain in the solar system, Olympus Mons (22 km high, 3× Everest). It has two tiny moons, Phobos and Deimos, and evidence of ancient rivers and lakes. Humans may walk here in the 2030s!

Area Vibes: Warrumbungle transition zone — from Jupiter’s protection into the inner system. The volcanic landscape echoes Mars’ own geology. Kamilaroi people read the land for water, game, and seasonal signs — skills that would serve any future Mars explorer.

EARTH & THE MOON — Our Beautiful Blue Home



Location: Billboard near Coonabarabran on the approach to the AAT (Sun).

Type: Terrestrial (rocky) planet + natural satellite

Size: Earth 12,742 km diameter; Moon 3,474 km diameter

Distance: 1 AU (Earth); Moon averages 384,400 km from Earth

Orbit: Earth 365.25 days; Moon 27.3 days (sidereal)

Known: since ancient times — the only planet not named after a god or goddess.

Visited: Dozens of crewed and uncrewed missions. Apollo 11 (20 July 1969) – first humans on another world. Ongoing: International Space Station, Artemis programme, and many Earth-observation satellites.

Fun Fact: Earth is the densest planet in the solar system and the only one known to host life. The Moon stabilises Earth's axial tilt (giving us relatively stable seasons) and creates the tides. Without the Moon, Earth's climate would be far more chaotic.

Area Vibes: Approaching Coonabarabran and the Warrumbungle mountains. Kamilaroi people have sung the Moon's stories for millennia — tracking its phases for ceremony, travel, and seasonal knowledge. The same dark skies that guided ancestral navigation now host modern telescopes.

VENUS — The Morning & Evening Star (Earth's Evil Twin)



Location: Billboard approaching the Sun / AAT on the final stretch into Coonabarabran.

Type: Terrestrial (rocky) planet

Size: 12,104 km diameter (almost the same size as Earth)

Distance: 0.72 AU

Orbit: 225 Earth days

Known: since ancient times as the brightest “star” in the morning or evening sky.

Visited: Magellan (radar-mapped the surface in the 1990s), Venus Express (ESA), Akatsuki (JAXA – currently orbiting), and earlier Soviet Venera landers that survived only minutes in the extreme heat.

Fun Fact: Venus is the hottest planet in the solar system (surface ~460 °C) because of a runaway greenhouse effect. A day on Venus is longer than its year (243 Earth days to rotate once, 225 days to orbit the Sun) and it rotates backwards (retrograde).

Area Vibes: Final approach to the AAT. The bright “evening star” that Kamilaroi and many other cultures have watched for seasonal and ceremonial timing now has a physical billboard on the drive — a modern marker on an ancient sky-watching path.

MERCURY — The Swiftest Planet



Location: Billboard very near the AAT (Sun) on the final approach.

Type: Terrestrial (rocky) planet

Size: 4,879 km diameter (smallest planet)

Distance: 0.39 AU (closest to the Sun)

Orbit: 88 Earth days

Known: since ancient times — the fastest-moving of the classical planets.

Visited: Mariner 10 (1974–75), MESSENGER (orbited 2011–2015), BepiColombo (ESA/JAXA joint mission – arriving at Mercury in the late 2020s).

Fun Fact: Mercury has a huge iron core that makes up about 85 % of its mass. Extreme temperatures range from -180°C on the night side to 430°C on the day side. It is slowly shrinking as its core cools.

Area Vibes: Almost at the Sun. The closest planet to our star sits just before the AAT dome on the scaled model — a final reminder of the solar system's extreme environments before you arrive at the heart of Australia's darkest skies.

THE SUN (AAT Dome at Siding Spring Observatory)



Location: The Anglo-Australian Telescope dome at Siding Spring Observatory — the physical “Sun” of the entire Solar System Drive.

Type: G-type main-sequence star (yellow dwarf)

Size: 1.39 million km diameter ($109 \times$ Earth)

Distance: 0 AU (the centre of our solar system)

Age: Approximately 4.6 billion years

Mass: 99.86 % of the entire solar system's mass

Visited / Observed: SOHO (1995–present), Parker Solar Probe (2018–present – closest approach ~ 6.9 million km), Solar Orbiter, and countless ground-based observatories including the AAT itself.

Fun Fact: The Sun is a middle-aged yellow dwarf. In about 5 billion years it will expand into a red giant and eventually engulf the inner planets. Every second it converts 4 million tonnes of matter into energy — the light and heat that power life on Earth and the very reason the Solar System Drive exists.

Area Vibes: You have completed the scaled journey. The AAT dome stands for our life-giving star. Here modern astronomy and ancient Kamilaroi sky knowledge meet under some of the darkest skies on Earth. The Emu in the Sky stretches across the Milky Way above you. Welcome to the heart of Australia's first International Dark Sky Park.

At the Sun — the Anglo-Australian Telescope — you have completed your scaled journey through the solar system. The dome represents our life-giving star. Here, modern astronomy and ancient Kamilaroi sky knowledge meet under the darkest skies in Australia. The Emu in the Sky constellation stretches across the Milky Way above you. Welcome to the heart of the Dark Sky Park.

JOURNEY TIPS — FUEL, FOOD, EV & STOPS

Make the drive part of the holiday. Slow down, stop often, connect with Country.



Recommended Eateries & Experiences:

- Robin Hood Inn, Jerries Plains (Hunter/Merriwa route) — Classic country pub meals, friendly locals, perfect midway stop.
- The Vines Restaurant, Hollydene Estate (near Denman, Hunter route) — Excellent food, cellar door, and fast EV chargers! Great for a longer break.
- Zin House, Lowes Wine Estate, Mudgee — Fine dining in beautiful setting, local wines. Book ahead if possible.
- Silver Fox Café, Gulgong — Casual, delicious, historic gold-rush town vibe. Perfect before or after the Mudgee/Gulgong Pluto/Neptune/Uranus billboards.

EV Charging: Hollydene has fast chargers (highly recommended). Other towns have standard chargers — use PlugShare or similar app for real-time status. The routes are EV-friendly with increasing infrastructure.

Public Toilets & Fuel: Available in all major towns along the routes: Merriwa, Gulgong, Dunedoo, Coolah, Binnaway, Gilgandra, Gulargambone, Narrabri, Gunnedah, Coonabarabran. Most have 24h fuel options. Fill up in larger centres for best prices.

Planet Location Quick Search: Search “[Planet] Solar System Drive [Town]” e.g. “Saturn Solar System Drive Gulargambone” or “Pluto Solar System Drive Merriwa”. The billboards are large, dark blue, and unmistakable.

Pro Tips:

- Best light for photos: early morning or late afternoon (golden hour on the billboards).
- Bring binoculars or a small telescope — some billboards have great views of the real night sky too!
- Download offline maps (Google or Maps.me) as signal can be patchy in the Pilliga and Warrumbungles.
- Respect the land: stay on paths, take only photos, leave only tyre tracks. The Yowie/Hairy Ones and ancestors are watching — in the best possible way.

A companion guide with direct Google Maps links, exact GPS coordinates, updated EV map, toilet locations, and fuel stops is attached separately. With our local knowledge and lived driving experiences — we want every guest to have the smoothest, most magical journey possible.

Welcome to the AAT (SUN) at Siding Spring Observatory



The AAT observatory — The heart of the Dark Sky Hub

You have travelled the Solar System Drive — from the frozen edge of Pluto, through the stormy giants, past the Red Planet, and into the warm inner system to our Sun at Siding Spring Observatory. Now you arrive at Australia's first International Dark Sky Park, nestled in the Warrumbungle Mountains of this scaled model, on the unceded lands of the Gamilaraay people in the Pilliga region.

Here, the ancient, scarred trees, the heritage cave with its fish and goanna rock art, the hidden aquifers that respond to water divining. The Emu in the Sky watches over us. Enjoy the night sky experiences under some of the darkest skies on Earth. Slow down. Listen deeply. Let the land and the stars speak to you in their own language.

We are honoured to share this place with you. May your journey here — and your time with us — be filled with wonder, respect, and the deep peace that comes from being in right relationship with Country and Cosmos.

Dark Sky Hub at the AAT and Warrumbungles

Warrumbungle & Pilliga Region, Gamilaraay Traditional Lands • New South Wales, Australia

www.darkskyhub.com.au | [@darkskyhub](https://www.instagram.com/darkskyhub)

Safe travels along the Drive. We can't wait to welcome you in Coonabarabran.