

## FACTSHEET FOR MEDIA

### ESA'S NEW NORCIA 3 DEEP-SPACE ANTENNA

|                        |                                                     |
|------------------------|-----------------------------------------------------|
| Name:                  | Deep Space Antenna 4 (DSA4) / New Norcia 3 (NNO3)   |
| Location:              | <a href="#">New Norcia, Western Australia</a>       |
| Construction start:    | <a href="#">June 2022</a>                           |
| Inauguration:          | October 2025                                        |
| Entry into operation:  | Early 2026                                          |
| Funded by:             | European Space Agency                               |
| Co-funded:             | Australian Space Agency                             |
| Height:                | 40m                                                 |
| Total mass:            | 700t                                                |
| .. of dish antenna     | 140t                                                |
| Dish diameter:         | 35m                                                 |
| Effective range (max): | ~750m km (~5AU) → adequate for ESA Juice at Jupiter |
| Transmit power (max):  | 20kW (X-band)                                       |
| Rotation speed:        | > 1° per sec                                        |

#### At a glance

- The European Space Agency (ESA) is expanding its [deep space communication capabilities](#) with the construction of a new 35-metre deep-space antenna – the fourth of its kind. It will be joining the existing one at New Norcia station, Australia, part of the Agency's [Estrack ground station network](#), to help meet the Agency's fast increasing data download needs.
- When the new deep space antenna enters service in 2026, it will support ESA's current flagship missions flown as part of the Agency's scientific, exploration and space safety fleets, including Juice, Solar Orbiter, BepiColombo, Mars Express, Euclid, ExoMars Trace Gas Orbiter and Hera, and upcoming missions including Plato, Envision, Ramses and Vigil.
- The [Estrack station at New Norcia, Western Australia](#), demonstrates ESA's strong engagement in the Asia-Pacific region and especially Australia, part of the long-term cooperation between ESA and Australia in the space domain. It enables significant economic, technology and scientific benefits for both partners, and will pave the way for further collaboration in areas such as communications, space safety and mission operations.
- Like ESA's existing [deep-space stations](#), which communicate with spacecraft as near as lunar orbit to missions hundreds of millions and even billions of kilometres away, the new antenna incorporates cutting-edge cryocooling, advanced clock and timing systems, AI, and world-class radio-frequency communication technology to support deep space communications.

#### About Estrack

- ESA's global ground station network ([Estrack](#)) consists of six core stations on three continents plus the ESOC mission control centre in Germany, comprising critical infrastructure that enables

Europe's independent ability to fly any type of mission and track spacecraft and launchers through any phase of their flight, from lift-off to end of mission.

- This infrastructure is needed to fly Europe's one-of-a-kind [missions](#) spanning science, exploration and space safety and is critical to Europe's autonomy and resilience as a space power.
- Estrack stations support missions orbiting Earth or located at the scientifically important Lagrange points, voyaging across our Solar System, watching our Sun or enroute to asteroids as part of humanity's planetary defence efforts.
- ESA's ground stations directly support European scientists and their engagement with the international scientific community.
- The Estrack network is a vital tool for global space collaboration, and cross-support arrangements with ESA's international partners enable mutual benefit and boost efficiencies for all.

### **About the New Norcia station**

- The antenna's location in Western Australia provides a strategic geographical position for around-the-globe coverage for deep space missions. It is a perfect complement to ESA's stations in [Malargüe \(Argentina\)](#) and [Cebreros \(Spain\)](#).
- Western Australia is also the location over which payloads launching from Europe's Spaceport in Kourou, French Guiana, separate from their launcher. Located a few hundred meters from the deep space antennas, a smaller 4.5-metre dish tracks Vega-C and Ariane 6 launches and acquires critical telemetry used to monitor their in-flight status.
- The station hosts a custom-built [transponder antenna](#) to calibrate the measurements of ESA's Biomass mission, launched in 2025.

### **About the construction project**

- Construction has been led by European industry. The project's prime co-contractors are [Thales Alenia Space](#) (France) and [Schwartz Hautmont Construcciones Metálicas](#) (Spain).
- Local Australian industrial partners were responsible for upgrading the necessary infrastructure to prepare the New Norcia site for a second deep space antenna, such as roads, power and data.
- Australia's national science agency, CSIRO, has been ESA's local partner for operations and maintenance since 2019 and will likewise be responsible for the additional new antenna.