

News story: Cornwall to host world's first commercial deep-space communications station

Goonhilly antenna at night. Credit: Goonhilly Earth Station.

Under a new project Goonhilly, which famously beamed images of the moon landings to millions of television viewers, will be upgraded to enable it to provide deep-space tracking and satellite communication services on a commercial basis. It will be the first time the UK has had the capability to communicate directly with deep-space missions.

Goonhilly LEP

Science Minister Sam Gyimah said:

"We're working hard to ensure the UK thrives in the commercial space age as part of the Government's Industrial Strategy, so it's fantastic to see the world's first commercial deep space communications network coming to Cornwall.

"The UK Space Agency has played a vital role in supporting this partnership and will continue to work alongside industry, local leaders and international partners to grow the UK's share of the global space market. We already play a significant role in satellite manufacturing, with one in four of the world's telecommunications satellites built in the UK, and want to establish the UK as a world-leading destination for space launch. "

In future, Goonhilly will complement the capability of the European Space Agency (ESA)'s worldwide ground station network, which today comprises seven core stations supporting more than 20 earth, observatory, planetary and exploration spacecraft as well as European launchers.

Goonhilly antenna. Credit: Goonhilly Earth Station.

The contract is being funded through the LEP's Growth Deal with the UK Government, via ESA, including €2 million which comes from the UK Space Agency's investment in ESA. The investment will see ESA working with Goonhilly to upgrade one of its largest antennas, the 32 m-diameter GHY-6 antenna built in 1985, to meet the high-end performance and technology requirements needed by ESA, NASA and private space exploration companies for deep-space communications, including high bit-rate data links.

Colin Baldwin, Head of Local Growth Strategy at the UK Space Agency, said:

"We are delighted that the work the Agency did to support this partnership has come to fruition. We see huge opportunities for the developing space sector in Cornwall and look forward to working with local partners, including

Goonhilly Earth Station and the LEP, as their plans develop.”

The investment will provide a huge boost to Cornwall’s space ambitions. Once the upgrade work is complete, Goonhilly will have the ability to track and control forthcoming robotic and human missions to the Moon and Mars, making a significant technical and economic contribution to European efforts in global space exploration.

During the approximately two-year work to upgrade the 32 m-diameter GHY-6 antenna – which carried the 1985 Live Aid concert around the world shortly after it was built – qualifying tests will be carried out under ESA’s oversight to include tracking of several of the Agency’s deep-space missions, including the Mars Express spacecraft which has been in orbit around the Red Planet since 2003.

Goonhilly CEO Ian Jones said: “We already have a great deal of interest in using the upgraded antenna from our international customer base. This includes space agencies, such as ESA, as well as some of the new private space exploration companies.

“The team here at Goonhilly, along with colleagues at the LEP, ESA and the UK Space Agency, have been working incredibly hard to achieve this fantastic outcome. We now look forward to getting on with the upgrade work which will bring a new expansion of the company.”

The UK’s Local Growth Minister, Jake Berry, said:

“It is very encouraging to see a Local Enterprise Partnership using Government’s Growth Deal funding to support a rapidly growing sector through public and private sector collaboration. This contract will create skilled new jobs in the local area while assuring Cornwall’s place in history for its contribution to space exploration.”