



Space Hub Sutherland Designing the UK's first satellite space hub

NORR is leading the design team, comprising Arup Engineers and erz landscape architects, in the development of the UK's first satellite launch Space Hub in Sutherland, Scotland. The ambitious plans will see vehicles carrying commercial satellites launched vertically into space for earth observation. NORR is supporting Highlands and Islands Enterprise (HIE) on this unique venture. This £17.5 million project (\$21.8 million) achieved a major milestone on June 26, 2020 by gaining planning consent from the Highland Council.

The Space Hub project is exciting, as well as complex and sensitive. The integration of a vertical small satellite launch facility, with associated infrastructure into this rural and naturally significant site, presents many interesting challenges. The flora, fauna and scenery behind the natural significance of the area have been considered as part of the spaceport's design and construction.

The first launch from the Sutherland site could be as early as 2022 and it will include a launch operation and control centre, launch site integration facility, single launch pad, antenna park and associated site infrastructure.

David Oxley, Director of Business Growth with HIEsaid, "Gaining planning approval from the council is a huge step forward for Space Hub Sutherland. The UK's space ambitions present a wonderful opportunity for the Highlands and Islands. A vertical launch spaceport is a key piece of the national jigsaw, along with the design and manufacture of satellites and launch vehicles, that will ensure Scotland can derive maximum economic benefits from this growing and exciting sector.

CLIENT	Highlands and Islands Enterprise
PORTFOLIO	Transportation
CATEGORY	Aviation
LOCATION	Sutherland, Scotland, UK
DATE	2022
SERVICES	Architecture

Transportation

NORR's Transportation Studio develops aviation, transit and multi-modal hub solutions for clients around the world. We understand the needs of government and private operators to maintain, upgrade and provide new transportation services and supporting infrastructure. Our design solutions are purposedriven to build better, more efficient and environmentally-friendly transportation nodes that incorporate flexibility for future system expansion.

Integrated Designs for Aviation

NORR has proven expertise in all aspects of airport design, engineering and operations, from curb side to airside. Our global team has designed and managed complex projects for the transportation industry, including terminal buildings, parkades, maintenance and training hangars, de-icing facilities, runways, taxiways and aprons. Our design work extends to master planning, interior reconfigurations, lounges and retail buildouts. NORR has been involved with prestigious projects located worldwide, beginning in 1964 with Canada's largest airport, Toronto Pearson International Airport.

Managing the Complexity of Transit Projects

Public transit, including subway and light rail transit, is vital to a healthy sustainable city. At NORR, we work collaboratively with all levels of government and private operators to provide planning and programs that increase capacity, eliminate spatial and technical limitations on balance with financial realities. We have developed a framework for detailed project phasing and staging strategies, for design implementation through to construction, that has the least impact on the system and traffic flow.

Multimodal Transit Hubs

All levels of government are looking to move people and goods through multimodal transit hubs providing more options, enhanced service and increased efficiencies. NORR has been at the forefront of planning, developing, and implementing projects that include regional transit, railway and, ferry terminals and border crossings. Our experience goes far beyond design and engineering. Today, the reduction of carbon dioxide emissions, elimination of noise pollution and resolution of other environmental issues are all integral aspects of our work.



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