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Author: Mr. Scott Schneider
Australia

THE DEVELOPMENT AND BENEFITS OF THE WHALERS WAY ORBITAL LAUNCH COMPLEX:
A LAUNCH SITE DEDICATED TO HIGH CADENCE OPERATIONS TO HIGH INCLINATION
ORBITS

Abstract

In September 2021 launch services provider Southern Launch first operated the Whalers Way Orbital Launch Complex (WWOLC) located at the Eyre Peninsula in South Australia. This launch site is ideal not least due to its capacity for high launch frequency - low air and maritime traffic downrange with good year-round weather supports high cadence during operations. Secondly, the launch site offers high schedule flexibility where onsite technical delays can be accommodated given the launch date flexibility afforded by the low air and maritime traffic in the area. Another benefit of the launch site is ease of accessibility. WWOLC is located outside the regional Australian city of Port Lincoln and is supported by a existing vibrant heavy industry base and logistics network. Coupled with supporting unhindered southward direct ascent trajectories WWOLC is currently developing to host multiple launch activities, to the benefit of launch vehicle manufacturers and operators, and to facilitate quicker time-to-orbit for satellites, to the benefit of satellite manufacturers and operators. Southern Launch's primary milestone in the development of launch infrastructure at WWOLC is to enable rocket and satellite manufacturers to come on site and launch their rockets with as little as 48 hours' notice. By 2025 Southern Launch will have built two permanent launch pads enabling the support of multiple users and concurrent operations. Using new modular construction technologies, and adopting modern construction methods, launch infrastructure at WWOLC is developing its at a fraction of the cost of more established sites elsewhere in the world. Given the size of the NewSpace launch vehicle and the advances in radar technologies, the overall physical and environmental footprint of WWOLC is negligible. In fact, this paper will demonstrate WWOLC delivers ecological advantages to the flora and fauna in launch site area. This paper provides an overview of the complexities of developing a new rocket launch site in a country applying new, unique and untested space legislation, the successes to date, including benefits to community and to the environment, and the progress towards achieving an enduring Australian space launch capability for the benefit of the global space market.