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Geographical Information System-Based Approach for Vertical Takeoff and Landing Takeoff and Landing Site Selection

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Abstract : This research paper addresses the GIS analysis approach to the investigation of suitable sites for a vertical takeoff and landing drone. The study manipulated GIS and terrain layers into a proper input before the spatial analysis that included slope, reclassify, classify, and buffer was applied to the individual layers. The output layers were weighted, and multi-criteria analyzed before those patches failing to comply with filtering out criteria were discarded. Field survey for each suitable candidate site was conducted to cross-check the proposed approach with the real world. Conclusion was extracted for the VTOL takeoff and landing sites, and discussion was provided with further study being suggested on the mission simulation of selected takeoff and landing sites.

Keywords : GIS approach, site selection, VTOL, takeoff and landing
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