

Impulse Radar Raptor Mobile GPR System



Figure 1: Mobile system with Raptor GPR mounted to the rear of a survey vehicle.

Elite Survey is expanding our ground penetrating radar (GPR) capabilities with the Impulse Radar Raptor Mobile System. This cutting-edge technology delivers unparalleled speed, accuracy, and versatility in mapping underground utilities and subsurface features.

System Features

- Mobile Array GPR – Vehicle-mounted multi-channel radar for rapid large-scale utility mapping.
- Cart Conversion – Flexible changeover to a push-cart system for areas inaccessible to vehicles.
- High-Speed Data Collection – Efficient survey coverage over road networks, airfields, and large sites.
- Condor Processing Software – Advanced post-processing, visualisation, and data management platform
- Scalable Antenna Arrays – Configurable to suit project requirements, from narrow corridors to wide corridors.

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Figure 2: Push Cart System for areas inaccessible to vehicles

Applications

- Major Infrastructure Projects – highways, airports, and rail corridors.
- Urban Utility Mapping – dense service environments with high congestion.
- Defence & Secure Facilities – rapid, non-intrusive investigations over sensitive areas.
- Large-Scale Corridor Mapping – water, power, and comms infrastructure planning.
- Detection and mapping of subsurface pavement features – including the location of concrete slab joins, dowel bar positions, reinforcement patterns, voiding beneath slabs, and other hidden structural elements below the asphalt layer.

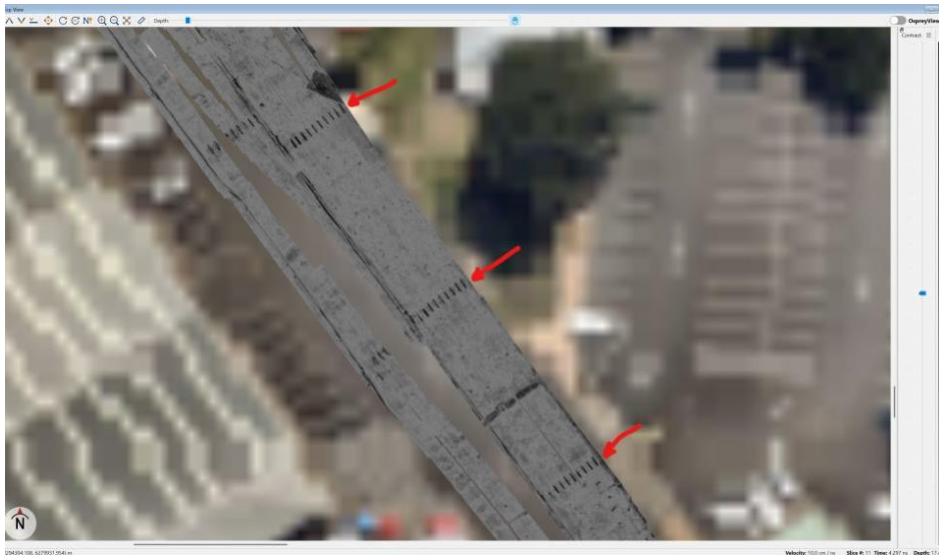


Figure 3: Condor software visualisation of concrete joins and dowels below the asphalt layer.

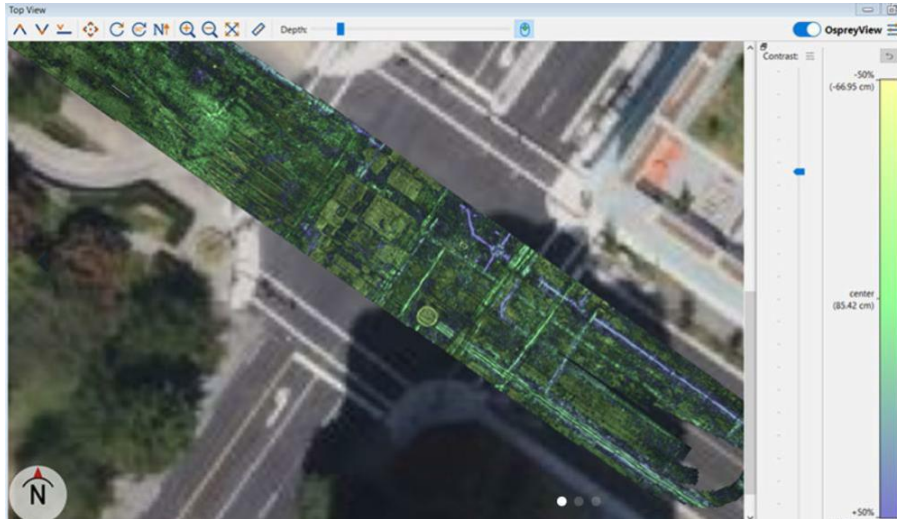


Figure 4: Condor software visualisation of subsurface utilities beneath a major intersection.



Figure 5: Condor software visualisation of old gantry rails below the asphalt layer

Benefits to Clients

- Greater Accuracy – detailed subsurface utility mapping beyond conventional EML/GPR.
- Faster Project Delivery – wide-coverage surveys completed in reduced timeframes.
- Reduced Risk – improved detection lowers the risk of strikes, delays, and redesigns.
- Integrated Workflow – Condor software links raw radar data to clear, actionable outputs.

Our Capability

By combining the Raptor Mobile GPR with Elite Surveys extensive surveying and utility investigation expertise, we can now offer industry-leading, high-resolution 3D subsurface mapping at scale. This investment continues our commitment to setting the benchmark in surveying and subsurface investigations.