



SOUTHERN MAPPING Ground Penetrating Radar (GPR)

Ground-penetrating radar is a geophysical method that uses radar pulses to image the subsurface. This nondestructive method uses electromagnetic radiation in the microwave band of the radio spectrum, and detects the reflected signals from subsurface structures.

The subsurface features which cause reflections are characterized by changes in electrical properties of the soil. All radar technologies operate under the same guiding principles dictated by electromagnetic physics. Clays and calcareous materials are electronically conductive and therefore not suitable for GPR penetration. Conversely, electrically resistive materials, such as limestone, are an ideal radar environment.

Services are primarily offered to the mineral exploration and geotechnical sectors. Working with engineering firms on geotechnical investigations and often leads to GPR applications such as tunnel lining inspections, and surveys for road, rail and sewerage tunnels.

Southern Mapping provides LiDAR, Hyperspectral, Thermal surveys and mapping; as well as satellite imagery and associated product and GIS services for a variety of industries and sectors. These include civil engineering and infrastructure development, mineral exploration and mine management, environmental planning and rehabilitation, and urban and agricultural planning.

