Location
Ramsgate, UK

Scanned
Ramsgate Underground Tunnels

Scan size
1km in length

Scan time
10 minutes per scan

Industry
Conservation

Mapping underground WWI tunnels

There is no doubt that historical projects hold great significance for a location's cultural heritage and its people. This is the fundamental concept that Historic England apply in their protection and conservation of sites that define English history and the nation itself.

They work within communities and alongside specialists to share their knowledge and skills so that everyone can enjoy and maintain the history that surrounds us.

This is evident in Historic England's Ramsgate Tunnels project, a five-kilometre network of underground passageways which were paramount to the war effort and the safety of local people of Ramsgate, Kent.

Ramsgate Tunnels were once used as an underground narrow-gauge railway, built to connect the town and docks to help improve trade links to Europe. However, the railway soon became a target for enemy bombing. To combat this, it was decided that the network of tunnels should be adapted to protect the people of Ramsgate, and work on this began in 1939.

Capable of sheltering 60,000 people during World War II, the tunnels were to become the most extensive underground public shelter system in the world, and subsequently, a historical site for many tourists to visit.

After the tunnels fell into disrepair and left behind a long existing collapse in one area, Historic England were invited to work alongside Ramsgate's Heritage Action Zone to redevelop the area's much-loved historical sites. The team needed a solution that could quickly and efficiently map the expansive tunnels, so they could begin work assessing the issues.

Historic England

GeoSLAM's ZEB Horizon improved the speed of scanning process dramatically.

Jon Bedford | Geospatial Survey Team Leader

Scanning with the **ZEB Horizon**

Historic England enlisted the help of GeoSLAM's handheld ZEB Horizon scanner. They chose this scanner due to its long-range capabilities, which allowed the team to provide a preliminary map of the damage, make plans to assess previously inaccessible tunnels and to extend visitor access.

As the ZEB HORIZON is handheld, it allowed Historic England to collect data as they walked through the tunnels. This meant the project was more cost-effective as the tunnels did not have to be shut down whilst the scans were taking place, which would not have been possible with traditional scanning methods.

The scanner's speed of capture also meant that the team completed the survey in only 9 scans, taking around 10 minutes each. This provided little to no disruption to the tunnels and did not require the team to spend long periods of time within them. Further, the ZEB HORIZON's ease of use enabled anybody to scan with very little training required, saving Historic England additional time and money.

The final scans will not only highlight the extent of the tunnels and the damage that needs redeveloping. They will also let the team from Ramsgate's Heritage Action Zone show who owns the land above the tunnels and detail how any scheduled work may affect this land. Images from the scans also capture the interesting hidden network of tunnels underneath the town.