

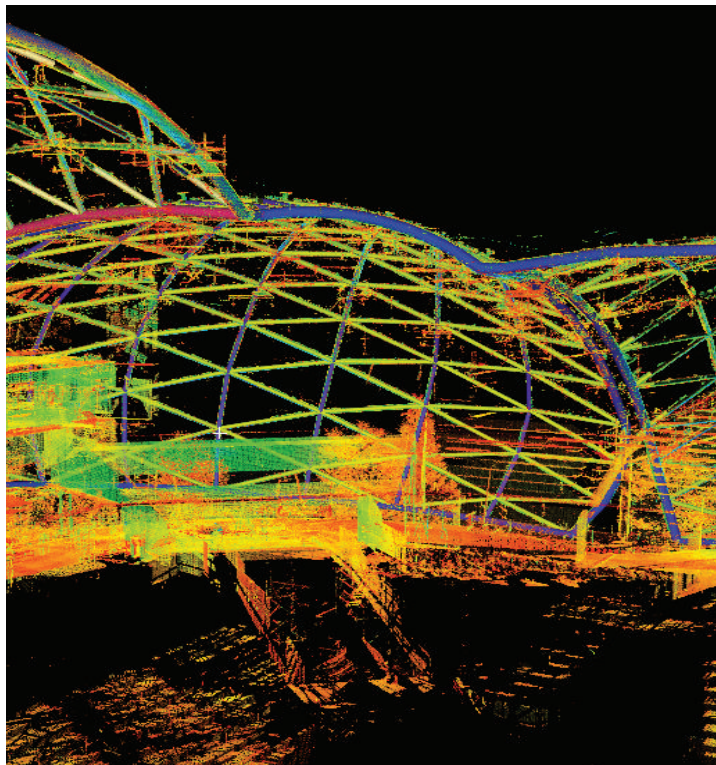


# LASER SCANNING 3D MODELLING AND BIM

## LASER SCANNING, 3D MODELLING AND BIM

AAM is an early adopter and investor in laser scanning, 3D modelling and BIM. We employ these technologies to survey the current status of the built environment and to enhance future design, construction and ongoing management. Recent projects include:

- Flinders Street Station—laser scanning and dilapidation survey, Melbourne
- Lane Cove Tunnel—3D modelling and movement monitoring, Sydney
- ANZAC Memorial—heritage survey, Sydney
- Sunshine Plaza—scanning and modelling, Maroochydore
- Singapore Smart Nation—laser scanning and 3D city modelling, Singapore
- Roe and Tonkin Highways Upgrade—mobile laser scanning with spherical imagery, Perth
- Brookfield Rail, Tilley-Mullewa-Narngulu lines—Hi-Rail MLS, as-built and condition survey of 220km of rail (incorporating 32 turnouts), Geraldton
- OneSteel—Whyalla Steel Power Station #2 blower upgrade, Whyalla
- Caltex Lytton Refinery—Fractionator as-built survey, Brisbane



AAMI Park building model produced from laser scanning.

## LASER SCANNING

Laser scanning collects data of a target area by recording millions of distance measurements, which result in a three-dimensional (3D) photo-like image. This spatially accurate point cloud data can be collected by TLS, MLS, a hand-held laser scanner, or as discrete points via a laser tracker.

AAM has developed specific expertise in scanning and 3D modelling of industrial process plants and heritage buildings, but also serves the broader construction industry with leading-edge survey services. This includes work for:

- Civil and structural engineers—Work-as-executed, structural modelling, dimensional control
- Architects and designers—Foundation modelling for BIM, site modelling, heritage surveys
- Project managers and builders—BIM extraction for construction surveying, as-built surveys
- Developers and property owners—Whole-of-life building management, whole-of-life facilities management, whole-of-life 3D lease management

## 3D MODELLING AND BIM

AAM is an industry leader in 3D modelling and BIM for heritage, high-rise, brownfields industrial facilities management and infrastructure construction. AAM produces all manner of data formats and a variety of modelling products.

- **Scan-to-BIM** delivers an accurate foundation BIM for reliable site and design dimensioning, clearance measurements and clash detection.
- **As-built scanning** accurately records the as-built position of structures, which are often too difficult, time consuming or dangerous to capture through conventional survey methods during construction projects, or within an operational industrial facility.
- **Data modelling** delivers structural, industrial and architectural models that accurately document existing conditions. This enables architects and engineers to repurpose and upgrade facilities designs.



