

PROJECT OVERVIEW

RBA were commissioned to provide civil & structural engineering design support for the construction of a new staff welfare facility at Ayr Station; including provision for foundation design, foul/rainwater drainage, retaining wall and road access/parking; along with all associated approvals and consents. Deliverables included a suite of structural design drawings inclusive of Designer's Risk Assessment and specifications to support the Building Warrant application. RBA also provided site support during the construction phase to respond to any technical queries from the Principal Contractor or end-Client Network Rail.

Foundation Design

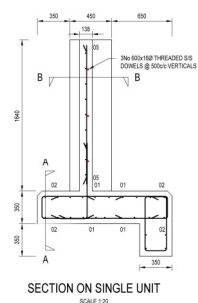
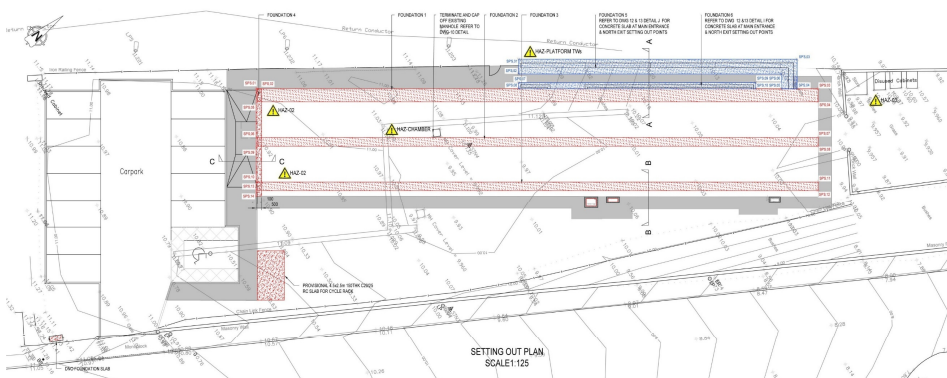
RBA provided the geotechnical specification for the preliminary ground investigation and analysis, including ground gas monitoring, in advance of the design commencing. On receipt of the requested factual reports RBA produced the technical reports (GIR/GDR) used to inform the design. The foundations comprised of traditional strip concrete foundations designed in accordance with EC2 and EC7. Consultation with the building provider (Sibcas) ensured foundations were designed and positioned to suit the building structure and applied loadings.

Drainage Design

Drainage design included the inspection and assessment of all existing below-ground drainage to ensure adequacy for the proposed foul discharge volumes. This also included in-situ percolation testing for soakaway design to BRE365 for surface water run-off. Consultation with Scottish Water was undertaken to gain necessary approvals prior to the drainage analysis being completed and detailed.

Retaining Wall, Car-Parking and Surfacing

RBA designed the new masonry retaining wall to support the access ramps on raised ground and associated build-up of surfacing for all access routes. Car-parking facilities were provided with RBA undertaking a swept-path analysis and specification for pavement design in accordance with current DMRB standards and industry codes of practice.



Services Snapshot

- Civils Designer duties under CDM (2015)
- Civil / pavement design
- Shallow foundations
- Surface / Foul drainage
- Ancillary civils for building services (HVAC etc)
- Technical Assurance