



Client: Pendragon
Project Value: £4 million

Project Details: Construction of a new showroom and workshop building at Warrington to accommodate the specialist used car sales operation of Pendragon and to complement the Stratstone and Evans Halshaw brands.

The project comprised the 11,000ft² showroom and workshop building with extensive external areas and a standalone valet building. The project was constructed on a 1 hectare site that was once the site of a motorway services and prior to that, a RAF base. The site was sloping and constrained on all sides which posed a topographical challenge, in addition the runway of the RAF base was still present below the site.

The site topography comprised a level differences and boundary constraints including the M62 and a hotel and an adjacent industrial development. Portland were able to profile the site to enable gradients to be maintained within the requirements of a retail environment and provide a commercial cut and fill design. The RAF base runway was present at 2m below the site levels and this was fully investigated, this was able to be used as a founding medium to avoid the costly excavation and removal.

The design involved liaising with the Architect, Client, M&E designer and Contractor however in addition, several workshop equipment suppliers had discrete requirements to be incorporated into the civil and structural design.

The building was split into three discrete areas, each with individual structural challenges; the sales area was required to be architecturally sensitive with a curved façade while administration core and workshop both had height constraints and required a slender, structurally efficient frame solution to ensure sufficient internal clear height was provided while also complying with constraints on the external building height.

An extensive earthworks modelling exercise was undertaken to provide a commercial bulk earthworks exercise without retaining structures while still providing shallow gradients suitable for a retail setting. This also allowed the perimeter levels to be coordinated with those of the M62 and the developments immediately adjacent.

The RAF runway was challenging and its removal unaffordable, therefore Portland specified survey works to ascertain its ability to receive the building loads and be incorporated into the building foundations. The outcome was favourable and allowed a significant saving to be realised

