

Civils

Pet Food Production Facility, East Anglia - sheet piled retaining wall to service yard

As part of the development of a large production building extension for a major pet food producer we undertook significant remodelling of the finished goods yard and car parking to the northern area of their site.

The site area, was cut into the existing ground and was previously occupied by a combination of lorry and domestic vehicle parking which was set on split levels accessed by a long sweeping gradient from the central area of the site. To reduce this ramped area down to the general site level but maintain both car parks it was necessary to detail a retaining solution for the upper levels to facilitate removal of the sloping ground and the creation of the new finished goods area.

A sheet piled retaining wall was adopted which would act as a temporary and permanent works solution. A 550mm deep larssen profile was used to retain the lower car park to a height of 4m and the upper car park adjacent to the gable of the distribution warehouse to a height of 8m. The use of sheet piling enabled the retaining wall to be installed and for the reduced level dig to take place afterwards.

The sheet piles to the lower car park were 9.5m long and designed as cantilever piles toed 6m to the gravelly clay subgrade. The upper car park used a tied solution with piles 13m long toed 3.6m into the chalk subgrade beneath the clay. The piles were tied 1m below finished ground level using 24mm diameter tie rods at 1.8m centres which were taken back to a row of 3.5m deep anchor piles 13m behind the retained face.

