

# New Cold Store and Mobile Racking



Location:  
Warrington, Cheshire



Client:  
Magnavale



Architect:  
Campus Park



Value:  
£6M



Civil Engineering

Structural  
Engineering

Building Consultancy

Geotechnical and  
Geoenvironmental  
Engineering

Project Management

Specialist services

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The development comprised a building of 104m long by 30m wide by 14.5m high extension to the existing cold storage facility.



## Engineering and Design Factors

The structure comprises a steel portal frame and ground bearing floor slab supported on pad foundations. Slab loading provided includes an allowance for forklift loads and 7 levels of mobile racking storage with leg loads of 140KN. The build-up of the floor consisted of a 200mm thick topping slab with 200mm of thermal layer and 200mm thick lower structural slab. AWP's role also included the design and detail of the belowground attenuated drainage. Foundation comprised pad bases to support portal frame with strip footing to support pre-cast perimeter wall by others with ground bearing slab laid on well graded granular material.

The site had two electric cables crossing it. We advised the client to divert these sufficiently away before any construction activities commenced. New locations of the cables were indicated on our drawings with warning triangle.

We also advised and assisted the client with trial holes to establish foundations of the existing building for the purpose of advising the architect to adjust the grids to avoid any potential issues between the new and existing foundations. Existing foundations were shown on our drawings to warn site workers not to damage these

## Description of the Works

AWP's role includes preliminary design of the superstructure, the slab and foundation, and investigation of the foundations to the existing building. AWP was also engaged to carry out the Flood Risk Assessment and drainage strategy for the proposed development. The work involved liaison with the drainage authority and sewer undertakers to agree discharge rates.

## Core services

Civil Engineering / Structural Engineering / Geotechnical and Geoenvironmental Engineering

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## Sectors

Industrial, Manufacturing and Petrochemical

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**Project:** New Cold Store and Mobile Racking

Alan Wood & Partners