

PROJECT FACT SHEET

Customer:

Sarah Constructions

Project:

Masters Home Improvements - Colonnades

Project Profile:

The project undertaken by Nilsen at the Masters Warehouse, Noarlunga site included the complete electrical services and communications packages. Even though the Warehouse has not been opened to the public due to the closure of Masters operations within Australia, Nilsen completed the full fitting out of all the specified services both internally and externally.

The electrical services package emanated at a new 2 MVA 11kV/415v transformer located at the North West corner of the site on Jackson Terrace. From the transformer, the 4 x 1c 240mm² consumers mains were routed via underground conduits to the main switchboard located externally on the northern perimeter wall. From the main switchboard, all of the submains cables are reticulated to each of 5 x main distribution boards via cable trays located throughout the roof space of the building. Each distribution board is located externally around the perimeter at strategic positions to minimize voltage drop across final sub circuits.

The internal lighting system comprises of a combination of LED and metal halide type luminaries. The LED luminaries are located within the main sales areas and offices/public amenities. The metal halide luminaries are located within the garden center and tradesmen areas. The external lighting scheme consists of LED luminaries mounted on 12 metre columns within the car park and mounted on the southern elevation of the building. The flood lighting on the eastern, northern and western elevations are metal halide type luminaries. All internal and external light fittings are controlled by the Fusion BMS system. The BMS controllers are mounted locally within each distribution board to provide zonal control.

The communications package consists of the main rack located within the main ground floor offices. From the mains comms rack, optical fibre cables are routed via high level cable trays to 4 of zonal comms racks within the main sales and tradesmen areas. From each zonal comms rack is a network of CAT6E cabling that are distributed to future connection points throughout the building. The public address system was also installed by Nilsen which is also utilised as the sounder system for the fire alarm system.

The project commenced in October 2015 and was completed in May 2016. 90% of the installation was over 10 meters high which required the Nilsen workforce to use scissors lifts extensively. The main co-ordination challenges on the Masters project involved detailed programming of the intensive high level activities in conjunction with the specialized polished concrete flooring contractors, as this required the concrete finished to be poured in sections that resembled a patch work quilt.

The combination of the extensive use of LED luminaries together with the sophistication of the BMS system has produced a highly energy efficient building.