

+ Nestle Distribution Hub

Tarlac, Philippines



The What

Osborne + Co developed a purpose build-to-suit Warehouse Distribution Centre in San Manuel, Tarlac, Philippines for Nestle

The 30,043 sqm facility is occupied and leased by Nestle Philippines Inc. (NPI) and will cater to their entire customer base located in the North Luzon region and a portion of the Central Luzon Region.

With completion and operational “go-live” achieved at the end of 2019, the DC operates 360 days/year, 7 days/week, and 24hrs/day.

Situated in the overall PRI Logistics Park development of total area 7 hectares, the property is located in San Manuel, Tarlac, and along the MacArthur Highway. It is approximately 5 kilometers from the TPLEX Carmen toll plaza, and 140 kilometers north of Central Manila.

The project is seen as a significant landmark on the central Luzon area and as a commercial benefit to north of Luzon and the local residents as well. The location and accessibility of the central warehouse is of great importance and is considered to be a critical success factor.



PROJECT START:
2018



PROJECT COMPLETION:
END 2019



325,000 FT²



£27M

The characteristics are as follows

Pallet Racking System

- Designed Storage Capacity
38,500 Pallet Space

Distribution Centre Site Composition

- Main Building
- Inbound and Outbound Loading Bays –
(Finger Docks; Dock Levelers and Plain Docks)
including Canopy
- Ambient Storage
- Controlled Temperature Room
(Confectionery Storage)
- Staging Area
- Bundling Area
- Battery Charging Room
- Empty Pallets Storage Room
- Reconditioning/Returns Room
- Offices, Server Room, Training Rooms
- Canteen, Staff shop and other Amenities
- Security Room and Guard house
- Parking and Internal Circulation Roads for
Maneuvering 60-foot trucks
- Cars / Motorcycles' Parking

The Results

- In securing this development, Osborne+Co had significant competition including a number of local developers and global 3PL providers
- This development was delivered through Osborne +Co.'s Philippines/Asia Pacific platform, which successfully delivered the Citibank Plaza building in Fort Bonifacio, Manila
- Osborne +co secured this development by successfully taking part in an RFP process undertaken by Nestlé in Early 2017 to identify a development partner
- As part of this process, we identified and acquired a site in order to fully meet the location brief provided by Nestle
- The distribution centre completed in 2019 and is now fully operational

The importance of collaboration at an early stage is key to a successful delivery.

Creating a DC designed inside-out with the operational users in focus

- Prioritizing efficiency
- Detailed planning
- Cost effective
- Operational
- Effectiveness

We worked hand in hand with Nestle team to configure the best design for the site

- Office size, no of staff, working habits,
- Warehouse and product flow,
- No of actual trucks, daily,/per hour,
- Docks and loading/unloading,
- Truck access, parking, and drivers area.
- Security & access.
- Future & beyond 2022.
- Racking systems: The racking design undertaken by Nestle preferred vendor (Dexion) and then tested against the operator and Nestle Business stakeholders locally and in Switzerland

Meeting and working with the Nestle stakeholders over a 3 day workshop, optimized the design in:

- Operations
- Admin
- 3PI

As a result of the workshop the skills PRI & Nestle required during the evolution of the build to suit brief were identified as follows:

- Engineering
- Costs and value Add
- Commissioning
- QA/QC
- HSE

The design was workshopped together for a real built to suit development for the specific site, we had selected



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The Tarlac Distribution Centre (DC)
has been designed to accommodate the following

2025 Annual Demand KGs
160,474,974

2025 Annual Demand Cases
22,846,962

2025 Annual Demand Pallets
550,269

2025 Daily Peak Inbound Pallets
2,140

2025 Daily Peak Outbound Pallets
2,782

Profile - Picking Ratio

Case Pick Ratio
50%

Pallet Pick Ratio
50%





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Design Specifications

Building and Infrastructure

- Designed for easy unloading and loading of goods, with a platform of 1.1m above external road level, prevent against flooding.
- The warehouse with a low concrete hollow block wall @ 1.5m high to eliminate damaged from forklifts.
- Roof and walls not to have any openings and windows for a controlled working lighted environment, and eliminate water leakage.
- Roofs are continuous length, non pierced and insulated with 100mm 50kg/m³ Rockwool, and withstand 250 km/h winds. Walls, are 0.6mm aluminium with insulated wall panels.
- We have adapted a structural steel portal frame design that would optimize the floor to ceiling clearance with-in the warehouse and achieve a maximum ceiling height of 13.70 meters
- A foundation type specific to the site conditions and the total calculated load of the warehouse was fully considered for proper site selection

Plain Docks and Finger Docks

We developed with nestle , the optimum number of plain docks and finger docks. Our design adapted the dimensions of proprietary dock levellers, shelters, shutter doors and telescoping docks. These dimensions allowed for faster construction and accurate installations on site.

The total width of the docks dictated the number of pallet bays which, in our design, provided an efficient ingress and egress of goods into the staging area.

A small satellite office was provided in the finger docks, as we have considered the distance of the main office from the truck dock area.

Racking and Pallet Layout & Position

The racking and pallet positioning were laid out in consultation from a Nestle approved supplier, Dexion.

- Total Pallets include 10% for raw storage
- With back-to-back aisles aligning with the truck dock areas and included both Pallet Shuttle Racks and Pallet Selective Racking
- 8 pallet rows high throughout- 12.1m high and 3.5m wide aisle spacing.
- Seismic framing and load considered within the racking.
- Lighting considered within shuttle tunnels area

DC Circulation

- The operational and internal circulation flow is designed to optimise efficiency, under the following premise.

- We designed the DC to have the shortest travel distance possible between racks and docks for an efficient operating cycle and use of space
- Dock levellers aligning with the racking system
- Minimum 15 meter clear space for staging of goods
- Direct forklift access to the MHE/BCA areas from the racking areas.
- Staff amenity areas and office areas have visual and direct connectivity to the warehouse area.
- Shuttle racking optimized for outbound products.
- 3500 m clear width between racking
- Inbound products stored towards the back of the DC and outbound products stored closer to the staging area

Engineered Services For A Healthy Warehouse

To attain continuity of business we considered key areas that need back-up power in the event of an interruption, primarily; anything that is related to safety, lights within the warehouse and power to servers.

Lighting was designed to achieve lux levels for a clear and bright working environment.

High Bay LED lights have been designed with the maximum coverage possible to lessen lights therefore lessen electricity consumption.

The ventilation system provides a comfortable working environment with appropriate energy systems to produce effective operating conditions at minimum cost and negative environmental impact

Fire Protection and Safety Precautions

Our design is based on an ESFR (Early Suppression, Fast Response) sprinkler system

In general, ESFR systems can be used in warehouses with storage that do not exceed 40 feet (12.192M) in overall height, and with a ceiling height of less than 45 feet (13.716M).

This eliminates the need for in-rack sprinklers and our maximum height in the warehouse was carefully designed to be compliant with the use of an ESFR system and without in rack sprinklers

Smoke detectors are placed not more than 9 meters apart from each other and not more that 4.5 meters away from any wall enclosure.

There are allocated in-rack fire house cabinets with a reach of not less than 20 meters

Emergency exits not more than 46 meters from any point of the warehouse

An emergency access road that can fit a fire truck or an ambulance was incorporated to access the back portion of the DC