

NEXTDC M2

Melbourne, VIC

CLIENT	NEXT DC
PROJECT SIZE	40,000sqm (land), 6,000sqm (building)
PROJECT LENGTH	
YEAR COMPLETED	2018

PROJECT FEATURES

Remediation of 32,500sqm which resulted in approximately 10,500cu m of contaminated waste being disposed

Uptime Institute Tier IV Certification of Constructed Facility

Uptime Institute Tier IV Certification of Design Documents

Seismic Importance Level 4

Flood-proofing of liquids stored on site (water, diesel)

Inert gas suppression system



NEXTDC M2 is a Tier IV Designed and Constructed facility – the first in Victoria and NEXTDC’s second in Australia.

The main feature of Tier IV certification is Fault Tolerance, and Certification of Constructed Facility shows that NEXTDC’s M2 facility has undergone rigorous on-site auditing and testing by Uptime Institute to confirm its ability to withstand individual equipment failures or distribution path interruptions and maintain IT operations. M2 was previously awarded Tier IV Certification for Design Documents (TCDD), the precursor certification for Tier Certification of Constructed Facility (TCCF). Uptime Institute Tier IV is the peak of the Tier Classification System created to consistently evaluate individual data centre performance. NEXTDC’s research and development methodology enabled the delivery of Tier IV data centres at capital costs per megawatt that are competitive with Tier III facilities.

The Structure for NEXTDC M2 is designed and constructed at Seismic importance Level 4: Buildings that must be operational immediately after an earthquake or other disastrous events, such as emergency shelters and hospital operating theatres, triage centres and other critical post-disaster infrastructure.

Data Hall 1 was fitted out and supplied by 6 externally-mounted IEC air conditioning units, integrated fitout with computer racks, bus ducts and associated services. The data hall maintains strict temp and humidity levels using specialised room pressurisation units. A new structural

grid ceiling supported the services suspended from the ceiling and provided a hot return-air plenum for the air conditioning. The front of house area was fitted out as office and client areas, which was separated from the data halls by a fire and bullet resistant barrier. Power is supplied at 22kV, then reduced on site to 400V using 200kVA transformers. Uninterrupted power is supplied to the building by independent powertrains. Powertrains consist of containerised generators and rotary UPS, connected through an Iso-Parallel Ring. This is distributed throughout the building using multiple, fire-isolated bus duct risers to supply flexible power supplies to the data halls. The building has been rated as a Tier IV facility by the Uptime Institute, a leading international data centre authority. This is the highest ranking offered by Uptime for redundancy and fault tolerance and M2 is the first in Victoria to be constructed to this standard. This was achieved by having multiple mechanical and electrical service reticulations, fire isolated from each other. Another Uptime consideration was flood proofing of liquids stored on site (water, diesel). This was achieved through the careful detailing of storage areas incorporating bunding and waterproofing into the design. The building also contains an inert gas suppression system for the technical spaces, requiring air-tight construction to maintain conditions during a discharge.