

COMPANY

Nan Fung Development Limited

PROJECT

AIRSIDE

LOCATION

New Kowloon Inland Lot No. 6556, Kai Tak Area
1F Site 2, Kowloon, Hong Kong

TYPE

Mixed-use Commercial Development

SCHEDULED TIME OF COMPLETION

Q1 2022

Real-time global collaboration through connected BIM



About Nan Fung Development Limited

Nan Fung Development Limited is a subsidiary of Nan Fung Group, one of the largest privately-held conglomerates in Hong Kong with global interests in real estate development and investment and holds a well-diversified, substantial financial investment portfolio. The Group was founded in 1954 and has a track record spanning over 50 years with over 165 projects including residential, commercial and industrial buildings. The Group also strategically focuses on first-tier cities in Mainland China and recognises attractive opportunities for development and investment overseas, including New York and London.

In recent years, the Group expanded its investment focus on ICE (Innovation, Creativity and Entrepreneurship), exemplified by its signature project, the Mills, a revitalization of its legacy yarn factories into a hub promoting tech-style and destination for culture and learning. The Group also made significant progress in investments related to life sciences in the US via Pivotal; and in Mainland China via an affiliate, New Frontier, which focuses on healthcare, elderly care, education and new technology.

BIM PARTNERS

Hip Hing Construction Company Limited

Ronald Lu & Partners (Hong Kong) Limited

Ove Arup & Partners Hong Kong Limited
J. Roger Preston Limited

Arcadis Hong Kong Limited

AUTODESK PRODUCTS USED

AEC Collection

BIM 360 Design

BIM 360 Docs

Project Description

AIRSIDE is a 1.9 million sq. ft mixed-use commercial development in the Kai Tak area - the new Central Business District (CBD 2.0). This flagship project, which set a record HK\$24.6 billion land bid in 2017, comprises of a 47-storey mixed-use development building including an over 30-storey Grade A office and a multi-storey retail complex with an interconnected underground shopping street connecting the entire Kai Tak area. The total investment in the project will reach HKD\$32.0 billion.

Project Challenges

AIRSIDE is a large scale mixed-use commercial project with a fast-track construction schedule involving a number of stakeholders. The development features building elements with unconventional, complex forms both in interior spaces and external envelope systems designed by internationally acclaimed Norwegian architecture and design firm Snøhetta which presented challenges in inter-disciplinary works coordination. Combined with the top-down construction of the underground structure, the complexity of the construction works, and fast-track schedule, the project team across different regions required more agile and collaborative works coordination platform and change management system.

Solutions for challenges

Use of cloud-based CDE and cloud-workshared BIM enabled the project team to collaborate on the same model and share project information with minimum delay despite various physical locations of team members across different timezones. During the design stage, the Design Architect in Oslo, Norway and the Executive Architect in Hong Kong responsible for different areas in the development simultaneously updated a single architectural model and coordinated the interfaces. During the construction stage, all contractors covering the major packages updated shared cloud-based BIM models for coordination and shop drawing production. The use of cloud-workshared BIM models made the whole workflow involving a large number of stakeholders more transparent as the project team could monitor the status of model update in real-time, thus enabled more agile design coordination and project information management during both design and construction stages.

How does BIM benefit the project?

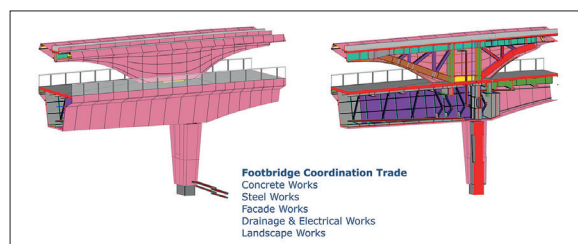
For the AIRSIDE project, the Main Contractor is required to submit BIM models for each Architect's Instructions involving Variation as 5D models, within the specified time frame as stipulated in the contract. This 5D BIM workflow has facilitated not only prompt works coordination by the contractors with timely update of changes but also greatly assisted in the quantity surveyor's estimation and valuation workflow with model-based quantities extracted from each 5D BIM submitted. The 5D BIM models introduced a new level of traceability for each AI estimate based on the model comparison, provided better visualization of design changes, and improved estimate accuracy that ultimately helps the project team for better budget control.

Better with BIM

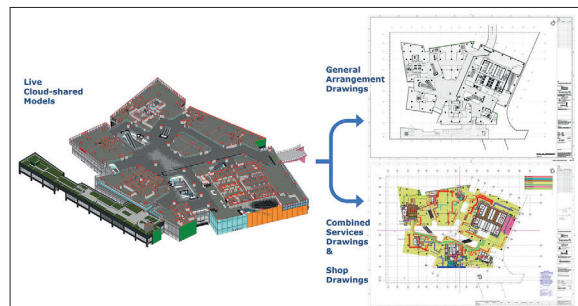
Implementation of BIM and CDE from early design stages has improved "traceability" of project information for the AIRSIDE project team. Cloud-based CDE keeps a record of all transmittal records in contract administration in the cloud which made it possible for project members to track the status of certain documents and its linked responses. Submission of 5D BIM model for each AI helped quantity surveyors to visualize changes and track exact elements that are affected by the change, and extract accurate quantities based on the model. With improved "traceability" through the use of BIM as a means of organizing project information, the project team is not lost in project information transmitted among stakeholders and able to make more informed decisions.



AIRSIDE is a large scale mixed-use commercial project that features building elements with unconventional, complex forms both in interior spaces and external envelope systems designed by internationally acclaimed Norwegian architecture and design firm Snøhetta. Image Courtesy of Nan Fung Development Limited



Use of parametric model for complex forms such as sculptural footbridge column made it possible for project team to respond to design changes and model update after inter-disciplinary coordination more rapidly. Image Courtesy of Nan Fung Development Limited



2D Shop drawings exported from the models were submitted together with source BIM via BIM 360 platform to facilitate the review and approval process by the consultants, reducing the number of potential RFIs. Image Courtesy of Nan Fung Development Limited

