

COMPANY

Wheelock Properties (Hong Kong) Limited

PROJECT

Proposed Residential Development at NKIL 6584, Off Sin Fat Road, Kwun Tong, Kowloon & Residential Development at NKIL 6564 Kai Tak Area 1L, Site1, Kai Tak, Kowloon

LOCATION

NKIL 6584, Off Sin Fat Road, Kwun Tong, Kowloon & NKIL 6564 Kai Tak, Kowloon, Hong Kong

TYPE

Residential Development

SCHEDULED TIME OF COMPLETION

End 2022

Design Visualization, BIM Collaboration and Coordination of Large Scale Projects

WHELOCK
PROPERTIES
會德豐地產

About Wheelock Properties (Hong Kong) Limited

Wheelock Properties is a wholly-owned subsidiary of Wheelock and Company Limited. Its principal activities include the undertaking of property development, sales and marketing, and asset management functions of certain Wheelock and Wharf Group properties.

BIM PARTNER

isBIM Limited

AUTODESK PRODUCTS USED

Autodesk Revit

BIM360

BIMTrack

Fuzor

Navisworks

Project Description

For NKIL 6584, this project consists of 8 residential buildings and two-floor podium with swimming pool in total GFA is 76,788m². Due to the large project scale, the site has been divided into three phases. For NKIL 6564, it has two towers and four mansions with a two-floor basement. To have a better quality of construction and optimize cost, BIM is adopted to reduce design problems & clashes as much as possible before constructing any element. Also, BIM Manager was adopted to monitor all the models progress and quality, and organize BIM meetings to review and resolve clashes found in BIM model.

Project Challenges

Since the scale of the two projects are enormous and tightness construction period, it is difficult to indicate all the clashes before constructing each element based on 2D drawings. Also, data management is one of the main challenges of this project. When there are clashes found in the drawings / BIM Models, RFIs are issued to consultants and request the information to resolve those clashes. A considerable number of information are exchanged through email, so that information missing, discrepancy and misunderstanding may be occurred due to the huge information without systematic management.

Solutions for challenges

Before constructing any elements, BIM models required to be reviewed at least once. All clashes will be labeled from the BIM models, presented by Main Contractor during BIM meetings, and solved by the Consultants. Also, CSD and CBWD are generated from BIM models such that Consultants can review the drawings based on the models.

To have a good collaboration during the project, Consultants are required to join the BIM meeting to review the clashes found in the models. Various team members can propose the feasible solutions to deal with the clashes or discrepancies. Also, BIM360 was adopted to organize all BIM information. BIM models, clash reports, and BIM-RFI. Those are uploaded to BIM360 by weekly to record the BIM model progress and the result of BIM meeting, such that it is easy to record and track the actions belongs to the parties.

How does BIM benefit the project?

BIM creates a good platform for information exchange. Consultant team were invited to participate the BIM meeting. It is an efficient way to solve the design problems or modeling issues which was indicated by BIM Manager to enhance the design and retain a high quality of model. Clashes can be identified and solved quickly through the models. Using BIM models to coordinate has greatly reduced the no. of RFI, turnover time and abortive works. Moreover, FM data were inputted in the models, so that information can be found easily by FM teams during the O&M stage.

Better with BIM

After adopting BIM, further applications can be applied using the BIM models, not only including finding & solving clashes, but Virtual Reality and 4D simulation.

4D simulations were made to simulate the construction sequence, such that all parties can understand the master programme easily. Some critical area where need to be improved can be identified on the simulation, such that better construction sequences can be applied to optimize the master programme.

Virtual Reality was applied, so that client and consultants can walk through the models in first-person point of view. All parties can easily review and understand the building design.



Rendering image for overall view of Sin Fai Road Residential Buildings
Image Courtesy of Wheelock Properties (Hong Kong) Limited



Rendering image for overall view of NK1L 6564 Residential Buildings
Image Courtesy of Wheelock Properties (Hong Kong) Limited



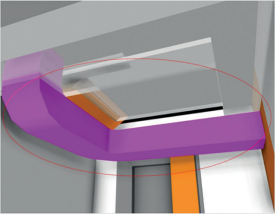
Rendering image for the Outdoor Swimming Pool of NK1L 6564 Residential Buildings
Image Courtesy of Wheelock Properties (Hong Kong) Limited



Show Flat Walkthrough using VR
Image Courtesy of Wheelock Properties (Hong Kong) Limited

71. B1/F Grid 11-12

Description: Air duct in club house lobby is placed below the ceiling



Author

Created

Last changed by

Last changed

Due date

Assigned to

Type

Priority

Status

Zone

Phase

Disciplines

Issue group

Confidentiality

Notification list

chow tungman (man.chow@bim.com.hk)

7/2/2020 8:51 AM

Suzanne Ha (suzanne.ha@gammonconstruction.com)

9/21/2020 6:48 AM

7/8/2020 4:00 PM

Suzanne Ha (suzanne.ha@gammonconstruction.com)

Design Issue

Critical

In Progress

ARC, MAC

COMMENTS

ISSUES BY PRIORITIES

Critical

5

High

5

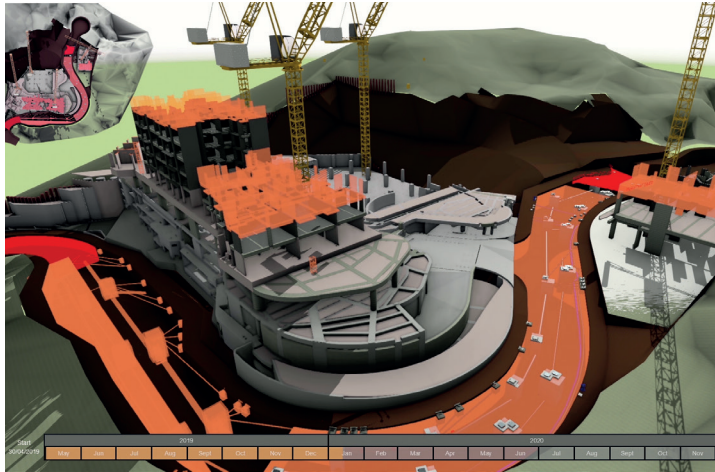
Low

2

Medium

9

Clash Report generated by BIM Track and Recorded in BIM 360 for Easy Data Management
Image Courtesy of Wheelock Properties (Hong Kong) Limited



4D Animation to simulate and optimize the construction programme using Fuzor VDC
Image Courtesy of Wheelock Properties (Hong Kong) Limited