

Chinachem Group

Project:
Asian House

Location:
1 Hennessy Road, Wanchai,
Hong Kong

Type:
Office

**Scheduled Time of
Completion:**
November 2016

BIM a Star for Big Screens



Chinachem Group is deploying BIM for a landmark project in Wanchai. The Revit model is proving invaluable, particularly for assessing the final appearance of four large, concave LED screens. The comprehensive BIM model will be used throughout design and construction phases, and facility management.

Landmark project for Chinachem Group

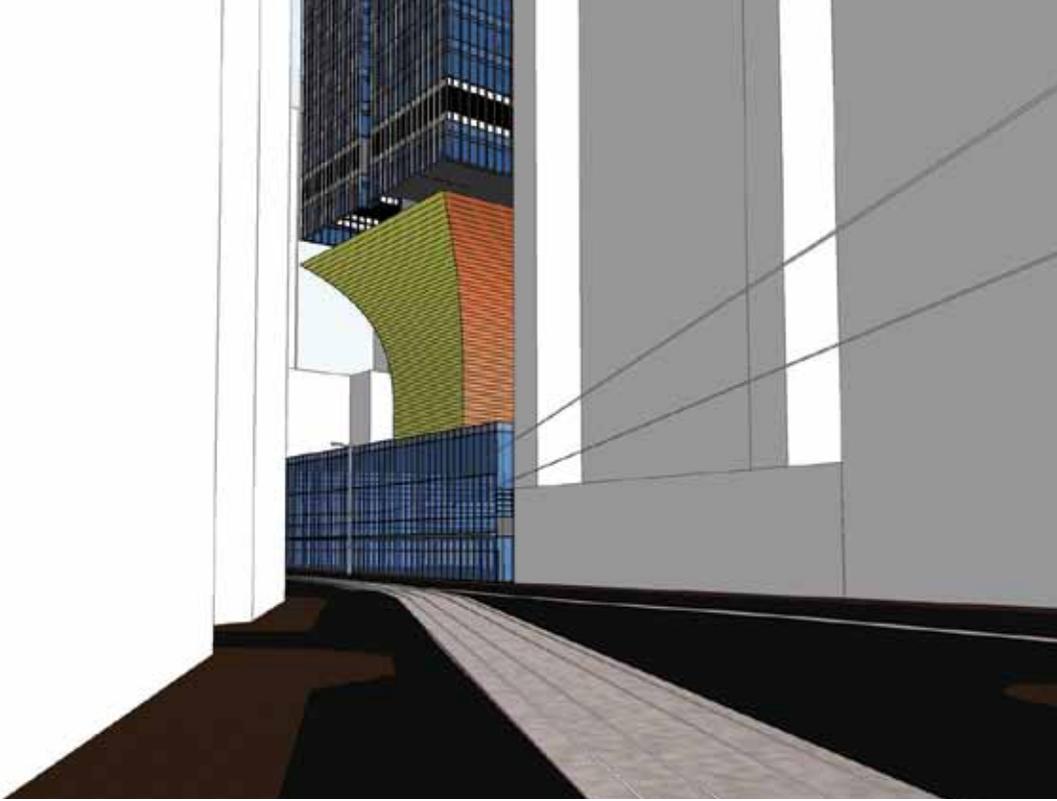
Chinachem Group is developing Asian House, in a redevelopment project involving construction of a 31-storey commercial building at the entrance of Wanchai district from Admiralty. With its prominent location, and design featuring a podium and a “neck” with expensive LED screens, it is set to become another landmark of the group.

“We saw the benefits of using BIM as a design tool by the design consultant in our Bisney Road Project which is one of the award winning projects in the last year BIM award. To release the full power and gain the most benefits, we decide to initiate and implement BIM by ourselves to extend its application in all aspects of our projects.”

“We are using BIM for the project to ensure quality, and control costs,” says Mr. Anthony Tam, Quantity Surveyor, Chinachem Group. This is the first time Chinachem has deployed BIM in full-scale, which will allow many different studies, with a range of uses including planning layouts and construction timing, and assessing spaces and headroom.

The project’s BIM consultant is WSP Hong Kong, and Ir Francis Leung, WSP Hong Kong’s Director and Head of BIM, explains that project design teams may provide hand sketches, CAD drawings or 3D models to develop the BIM model. The centralised BIM model then serves as a platform for design teams to study, boosting the efficiency of the design process and leading to an enhanced design.





“With BIM, it’s easy to see the end product,” says Ir Leung. “There may be places that are hard to visualise from 2D drawings, but 3D shows which part of a design doesn’t work. Changes can be made based on models, and final decisions can be made more quickly.”

BIM proves a boon for LED screens

A key feature of Asian House where the design was especially challenging is the “neck”, which has four concave surfaces, where designers aimed to locate three or four large LED screens. The visual effect and appearance of the displays could not be simply presented on 2D drawings. Plus, as the surfaces were curved, calculating each LED display area would not be straightforward, particularly with a need to optimise the shape and height of each display

in order to attain the best and most cost-effective arrangement.

Ir Leung outlines several of the questions that the team hoped to answer using the BIM model: “Should there be screens on all four sides – or with one side facing an adjacent building, shall we take away a screen? Will the podium block views of the LED screens? How will it look with four different videos on four sides – or with only images?”

The “neck” was modelled in Revit, producing a BIM model that generated areas of the LED displays, which were automatically updated as the designers changed the screen shape and height. Screen resolution is another key consideration, particularly as high definition screens are far more expensive than those of lower resolution. Ir Leung learned of LED

screen characteristics, and devised a means of indicating on computer screens how different resolutions would appear in reality.

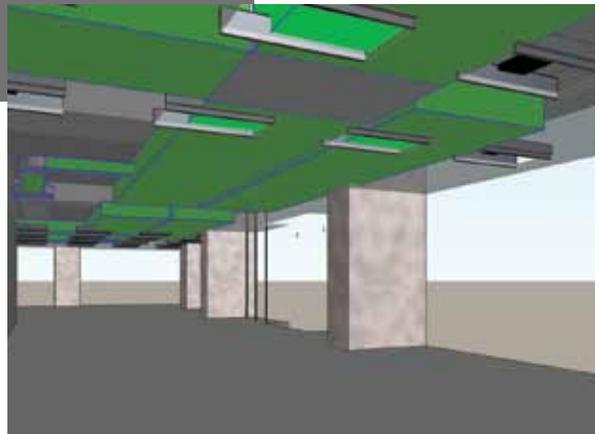
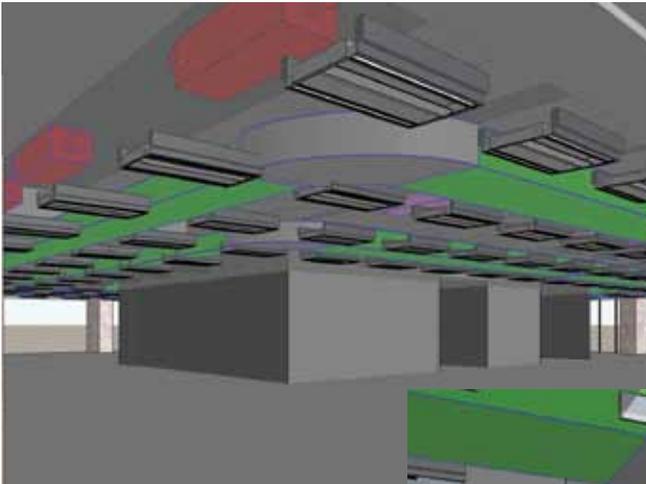
Data from the BIM model was then used to create 3D animations, which showed the views for pedestrians on Hennessy Road and Lockhart Road. “With the BIM model, we could see views from Johnston Road that showed the screen on the fourth side was visible, rather than blocked by the adjacent building,” says Ir Leung. “Previously, there was no way of studying this.”

As well as helping optimise the LED screen

design and resolution – whilst ensuring they are within budget - the BIM model can aid in positioning advertisements for maximum effectiveness. In future, it should even be possible to insert videos into the animation, so potential advertisers can see how they will appear.

Comprehensive deployment of BIM

Another example of the BIM model helping the design is assessing an existing footbridge. “We can judge from the model whether we should modify the footbridge, or just add a new exit,”



says Ir Leung. “Also, the existing building has support for a cable for the tram – the model can answer what will happen with this.”

With Chinachem Group supporting comprehensive use of BIM from project inception onwards, the model is innovative as Electrical & Mechanical designs can be included from an early stage – allowing 3D modelling of the combined services layout, showing critical items and minimising clashes.

Chinachem making further use of BIM

Though the Asian House project is in its early stages, the results of BIM modelling have already encouraged Chinachem to adopt BIM for forthcoming projects, all involving luxury housing.

For one project, to build five blocks of residences; BIM has helped conduct a feasibility study, such as by assessing and conducting a solar and micro-climate study to discover which building orientations will maximise residents’ comfort. The other two projects are both single block residences, helping Chinachem assess the effectiveness of BIM in diverse situations.

“With BIM, we can make better presentation in project meetings, helping show colleagues and senior management that BIM can do many things,” says Mr. Tam. “In the long-term, we will integrate the use of BIM for the whole building life cycle including facility management.”

**All images in this article are provided by Chinachem Group*



華懋集團

Chinachem Group



ABOUT CHINACHEM

The Chinachem Group (“Chinachem” or the “Group”) is one of Hong Kong’s best-known and most prolific property developers, with a successful corporate history of more than 40 years. Still the largest privately held group of its kind.

The early years of the company were dedicated to exploration of, and investment in, agricultural projects and chemicals, but in the 1960s, the Group was one of the first to see the future of property development in Hong Kong and shifted its focus to the development of the city. It has subsequently contributed tremendously to the city, working to meet the needs of its citizens.

By the mid-1970s, Chinachem had grown from a burgeoning company into one of Hong Kong’s largest property developers. The group has consistently maintained its position as a forward-thinking pioneer in the industry, active in the development of new towns and districts in Hong Kong. Tsuen Wan, Kwai Chung and Shatin were all developed in large part due to the dedication and foresight of the Group. Through their consistent efforts to improve Hong Kong, the Group continues to create private residences for elegant living for a wide range of Hong Kong’s residents and families.

Today the Group boasts an impressive and diverse range of high-quality properties that span Hong Kong Island, Kowloon and the New Territories, with business interests including hotel ownership and operation, residential and commercial properties, as well as retail and industrial interests in a number of Hong Kong’s best-known and most iconic buildings.

Chinachem has added to its portfolio of business interests on a global scale, investing in ventures related to its core businesses and associated industries, together with biochemistry, electronics, education and finance.