

COMPANY

Sun Hung Kai Properties Limited
Sanfield (Management) Limited
Strategic Building Innovation (SBI)
bimSCORE Limited

PROJECT

Tai Po Town Lot No. 253 and 157 RP, Sai Sha

LOCATION

Sai Sha, Shap Sz Heung, New Territories

TYPE

Recreation & Sports centre, Welfare centre,
Residential and Road Expansion

Sai Sha - BIM Everybody Everywhere



About Sun Hung Kai Properties Limited

Sun Hung Kai Properties Limited was publicly listed in 1972 and is now one of the largest property companies in Hong Kong. The Group specializes in developing premium quality residential projects and owns an extensive network of shopping malls and offices as well as a hotel portfolio and sizeable land bank. Over the years, SHKP has earned market recognition and customer loyalty through its unsurpassed quality and belief in Building Homes with Heart.

About Sanfield (Management) Limited

Sanfield (Management) Limited is a wholly-owned subsidiary of Sun Hung Kai Properties Limited. It keeps pace with today's constantly rising construction standards and requirements by leveraging innovative technologies as well as establishing a safe and rigorous construction system.

About Strategic Building Innovation (SBI) bimSCORE Limited

Strategic Building Innovation (SBI) bimSCORE Limited is an international team that helps government, asset owners and their supply chain to work more efficiently and integrate new technologies into their existing workflows.

BIM PARTNERS

Zaha Hadid Architects
P&T Group
LWK + PARTNERS
theOOQ Limited
Sun Hung Kai (A&E) Limited
AECOM Asia Company Limited
J. Roger Preston Limited
Lik Kai Engineering Company Limited
Sun Yu Chau Engineering Company Limited
Everlight Engineering Company Limited
Pyrofoe Engineers Limited
Chun Lee Engineering Company Limited

AUTODESK PRODUCTS USED

Autodesk® AutoCAD®
Autodesk® BIM 360® Docs
Autodesk® Dynamo
Autodesk® Navisworks® Freedom
Autodesk® Navisworks® Manage
Autodesk® ReCap®
Autodesk® Revit®

Project Description

The Tai Po Town Lot No. 253 and 157 RP development is a transformative endeavor that aims to revitalize the Sai Sha region of Hong Kong, encompassing a recreation & sports centre, welfare centre, residential part, and road expansion. This integrated development combines sustainable construction practices, the creation of sports and recreational facilities, and the integration of nature and modern design.

Project Challenges

The project faces two main challenges. First, its large scale involves numerous stakeholders, leading to extensive information exchange. We need to establish clear data standards to ensure the reliability of the information shared among all parties. Second, the project includes many freeform designs, making it a significant challenge to translate these designs into detailed drawings and execute precise construction. Addressing these challenges is crucial for the project's success and efficiency.

Solutions for Challenges

In this project, we utilized a Common Data Environment (CDE) as the single source of truth, establishing clear project standards to ensure the accuracy and reliability of data exchange, and identifying clear roles and responsibilities of different stakeholders. Additionally, we developed automation programs to facilitate data conversion and optimization of models. This approach allows us to transform complex designs into the necessary construction drawings and information. Meanwhile, by integrating advanced technology for precise positioning and installation, we aim to enhance overall efficiency and streamline the construction process.

How does BIM benefit the project?

The project team established a comprehensive performance evaluation framework to monitor the outcomes and benefits of BIM implementation. They utilized BIM to track design changes, identify potential issues, and ensure alignment between as-built conditions and original designs. This digitalization led to a significant reduction in rework, achieving a 90% decrease in opening reworks, which allowed construction to proceed smoothly without delays or compromising design integrity. Additionally, the use of RTS, laser scanners, and drones optimized workflows and enhanced productivity on-site. As a result, the project experienced notable improvements in labor productivity, ensuring timely delivery while maintaining high construction quality.

Better with BIM

During the installation of M&E systems, BIM effectively addressed design coordination and clash issues in advance, enabling multiple construction teams to work simultaneously and significantly improving efficiency over traditional methods. The involvement of various stakeholders, including consultants, was streamlined through a 3D model, which served as a common platform for communication and collaboration, helping to identify design discrepancies and construction challenges. Additionally, the project utilized many prefabricated components, such as external and interior walls, which required careful coordination of mechanical and electrical designs. By leveraging BIM, these steps were completed upfront, allowing for factory production and efficient on-site installation.



Image Courtesy of Sun Hung Kai Properties Limited and Sanfield (Management) Limited and Strategic Building Innovation (SBI) bimSCORE Limited

Site aerial image

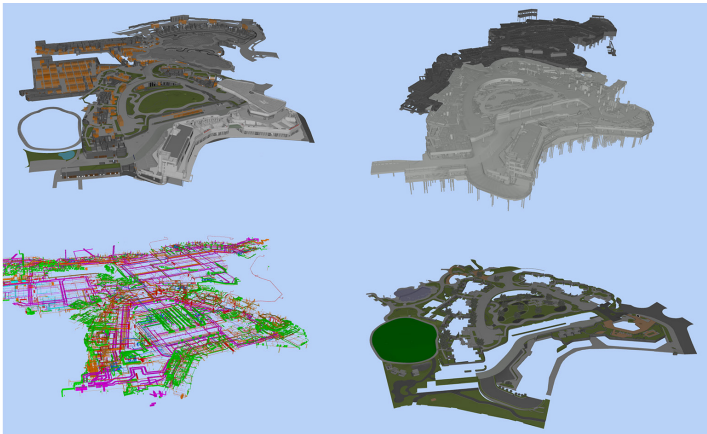


Image Courtesy of Sun Hung Kai Properties Limited and Sanfield (Management) Limited and Strategic Building Innovation (SBI) bimSCORE Limited

BIM coverage of residential part's podium



Image Courtesy of Sun Hung Kai Properties Limited and Sanfield (Management) Limited and Strategic Building Innovation (SBI) bimSCORE Limited

Technology adoption - Robotic Total Station



Image Courtesy of Sun Hung Kai Properties Limited and Sanfield (Management) Limited and Strategic Building Innovation (SBI) bimSCORE Limited

From fabrication to Production



Image Courtesy of Sun Hung Kai Properties Limited and Sanfield (Management) Limited and Strategic Building Innovation (SBI) bimSCORE Limited

Sai Sha Go Park

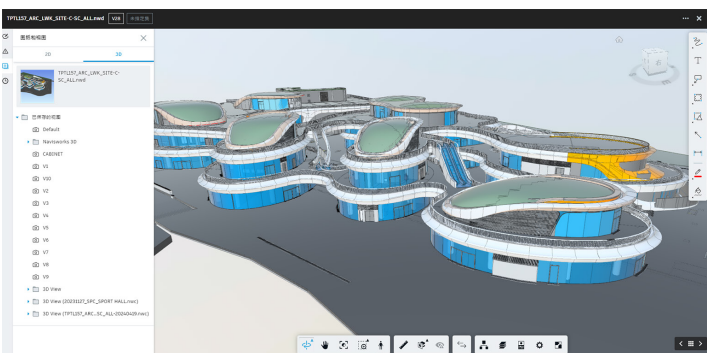


Image Courtesy of Sun Hung Kai Properties Limited and Sanfield (Management) Limited and Strategic Building Innovation (SBI) bimSCORE Limited

Image capture from BIM 360

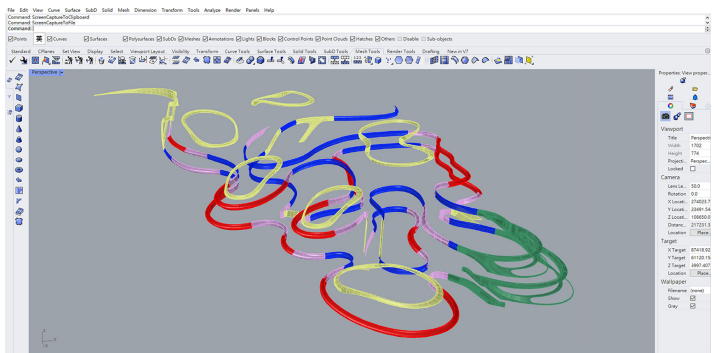


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Quantity take-off of Go Park glass reinforced concrete