COLLABORATION IS **THE KEY TO SUCCESS**

The Ministry of Health (MoD) Government Quarters building in Setia Federal Hill is Setia Precast Sdn Bhd's latest feather in the cap. The 15-storey project garnered the company the highest-in-the-country Industrialised Building System (IBS) score of 93.95, above and beyond the minimum IBS score of 70 mandated for all public projects worth above RM10 million. The significant milestone is a culmination of 23 years of history in the making.

Setia Precast Sdn Bhd specialises in prefabricated construction having built more than 23,000 units of prefabricated affordable residential units in the country under Setia IBS.

It was established in 1996 as a joint venture company, when S P Setia Bhd signed a JV with Taisei Prefab Construction Co. Ltd. (Japan) to build high-rise apartments in Pusat Bandar Puchong. The JV came about to address the acute shortage of construction workers and purchasers' demand of quality. Prior to that, Setia previously worked with Taisei Prefab in developing the PKNS low-cost housing back in the 1980s. In 2001, Setia Precast became a wholly-owned subsidiary of S P Setia when the latter bought over Taisei Prefab's shares and the transfer of technology was deemed to be complete.

Since then, Setia Precast has garnered a solid reputation as the indisputable leader in prefabricated construction. Notable large-scale projects include the development of government apartments in Putrajaya, private developments in Ampang, Setia Alam and Setia Ecohill, the institutional development in Asian Institute of Medicine, Science and Technology (AIMST) University in Sungai Petani, the Specialist Complex and Ambulatory Care Centre (SCACC) at Hospital Kuala Lumpur (HKL) and the commercial development in Setia City Mall, Setia Alam.

The MoD Government Quarters building was a highly collaborative project for Setia Precast, with a number of key deliverables. These include 15 storeys of 2,845 square feet Government Quarters, a community hall, prayer hall, management office and guard house.

"We see ourselves as a one-stop building contractor, where some of the components are produced by us and the rest are outsourced," said Mr Foong Fatt Kee, Setia Precast's Technical Head, who has amassed more than four decades of prefabrication experience.

For this project, Setia Precast produced the precast wall, half-slab, staircase, bathroom slab, fencing, signage, refuse chamber, prefabricated bathroom unit and Prefabricated Prefinished Volumetric Construction (PPVC) guard house. The other project components, such as the prefabricated roof truss, bubble deck slab for the community hall roof, bondex for the water tank floor and greenedge modular panels came from their partner IBS suppliers.

Notably, this 'Open System' in partnering with other IBS suppliers where they shared and interfaced with each other's unique products seamlessly was the key in garnering the top IBS score in the country.

"You may be producing the best precast wall in the industry but if the structure and other simplified solutions have low IBS scores, then the whole project's IBS score will be adversely affected," Foong explained.

Datuk' Ir. Ahmad 'Asri Abdul Hamid, Chief Executive for the Construction Industry Development Board (CIDB) Malaysia (centre) presented the award to S P Setia President and CEO Datuk Khor Chap Jen (fourth from left) in the newly completed government quarters building. Also present in the ceremony were CIDB Senior General Manager of the Technology Development Sector Datuk Elias Ismail; and S P Setia Deputy President and Chief Operating Officer Datuk Wong Tuck Wai.

"Over the years, we learnt that the best approach for IBS is collaborating with other quality IBS industry players. No one can do it all alone as the costs are simply too prohibitive," shared Foong. "If we produce a component that is only used for one project, it doesn't make any fiscal sense." Hence he strongly believed that for IBS to grow, more players must join the ecosystem to create specialised products. "With a larger base of IBS suppliers that meets or exceeds the minimum score of 70, it makes it possible for us to study the architect's layout and then source for the best system to fit it knowing that it can give us the standard of quality that we seek. This will help move the whole industry's value chain."

The IBS Scoring System is an assessment to measure the usage of IBS in a consistent way. In fact, IBS has been mandated for use in government and private projects since 2008 and 2018, respectively. By embarking on IBS back in the 1980s before it became a mandate, Setia Precast has shown keen foresight on how the technology can help spur the construction industry to greater heights.

"When we first embarked on IBS, the cost was 3 to 5% higher than the conventional way of doing things. However, the advantages afforded by IBS far outweigh the costs and we were able to complete our projects way ahead of our conventional peers. The sooner the structural framework of the construction can commence, the better it is for the developer's cash flow as the buyers can then begin their loan repayment," said Foong.
Other advantages observed include the reduction of foreign workers in the factory and on-site, the reduction of construction works, waste and noise on-site which are in close proximity to existing residential areas, the increase of quality in the finished works and consistency, and a marked increase in the health, safety and environmental aspects.

To Foong, the beauty of IBS was clearly demonstrated in the SCACC at HKL project involving an 8-storey V-shaped block with a 2½-storey car park along Jalan Pahang, Kuala Lumpur. "The site was smack-dab in the middle of one of city's busiest areas with all four sides surrounded by either main roads or existing buildings. IBS helped addressed the logistics issue as we manufactured the components off-site and transported them to the site during off-peak hours, thus avoiding causing congestion on the roads. There was also only one access and our lorry had to reverse to leave the site," Foong recalled.

Setia Precast's casting yard at Setia Ecohill 2, Semenyih, which has the capacity to produce 3000 apartment units per annum

PBUs being assembled at Setia Precast's USJ Yard

Setia Precast was awarded the IBS Award in the MCIEA 2013 for their success in adopting more than 70% of IBS components for the construction of the SCACC at HKL. The company also won three other MCIEA IBS Awards in year 2005 for Parcel 8 Putrajaya, 2016 for Setia Jati Setia Alam and 2017 for Seri Kasturi Setia Alam. They are also the first in Malaysia to use the Prefabricated Bathroom Unit (PBU) for high-rise residential developments at 24 units in MoD Bangsar, De Cendana and De Cemara.

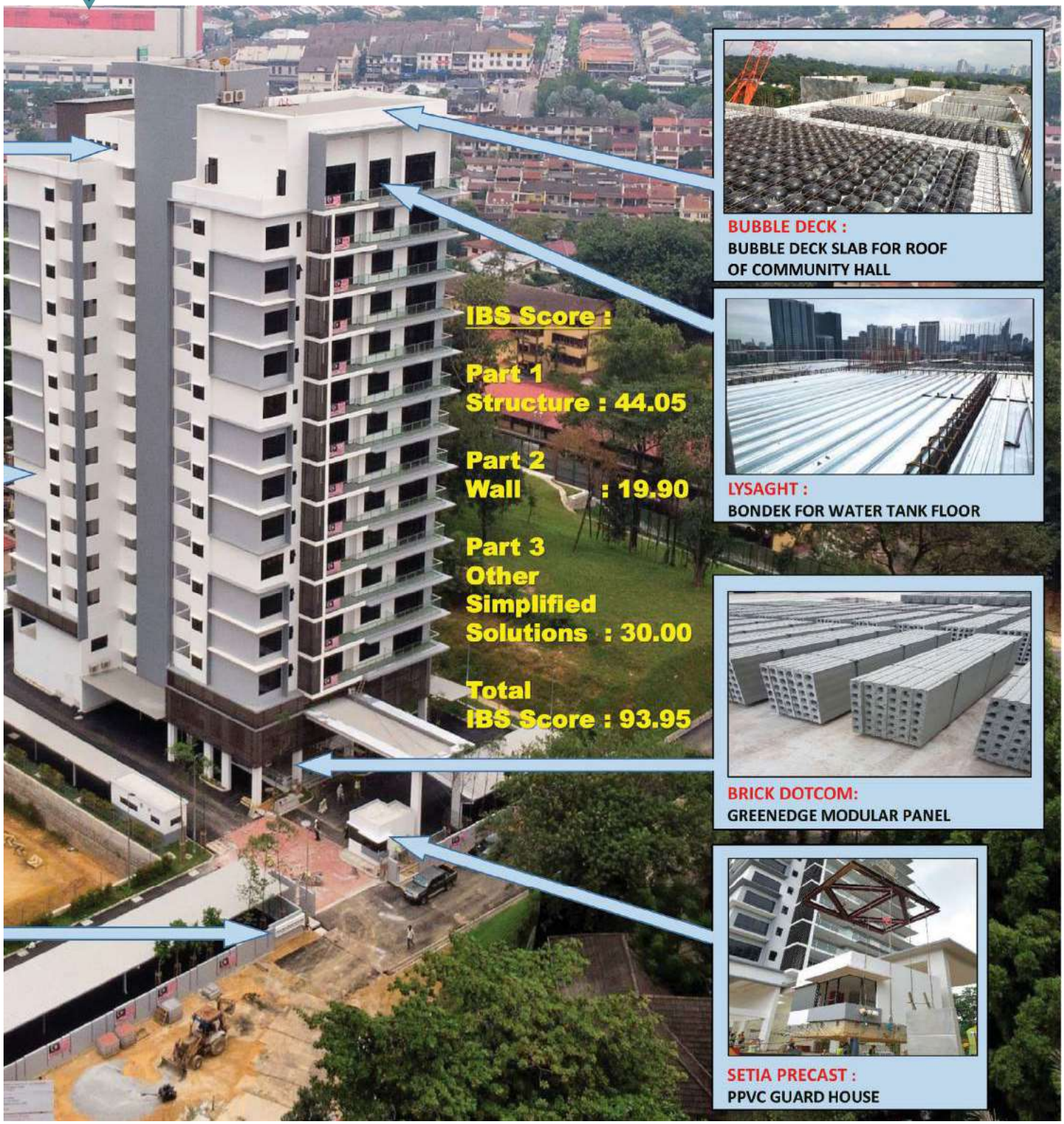
These awards spur Setia Precast's commitment to continue as the industry's frontrunner in adopting IBS technologies in line with the government's efforts to modernise the sector.

"With IBS, we also managed to cut short our delivery time for residential apartments from 22 months to 16 months. This is a significant increase in terms of speed of construction time and delivery," Foong added. He opined that IBS is suitable for all types of construction projects from single-storey to high-rise residentials; from multi-storey car parks to commercial projects as well as government buildings such as schools and hospitals. "IBS is, of course, best utilised on higher-density projects like high-rise apartments. They don't even look like cookie-cutter units, thanks to Setia Precast's expertise in creating intricate prefabricated wall designs, which add a sense of aesthetics, uniqueness and character to each building."

Moving forward, Setia Precast's aspiration is to depart from construction at the site and to manufacture homes and deliver them to the site by utilising PPVC. "I foresee that PPVC will be the next wave in the near future as the Malaysian construction industry addresses the skilled labour shortage. With it being fully fitted with facilities and finishing, PPVC is an ideal solution in urban areas with tight logistics challenges and remote areas with accessibility issues," Foong explained.

With the current enforcement to reduce the intake of foreign workers, IBS is starting to make more sense to the construction players. "IBS is becoming an affordable option as it uses less labour. If there's a lack of skilled workers for conventional projects, they will face quality problems for sure. Since IBS' components are produced in the factory to precise specifications, there is no need to incur extra costs to rectify non-conformance issues," said Foong. The bulk

Setia IBS Open System with Other IBS Suppliers



of the work for IBS occurs in the initial stages of the project where everything is scrutinised in detail to make sure that it all fits seamlessly together. "This requires a capable technical team and a lot of interaction with our consultants, but once the details are finalised, the project will proceed smoothly with minimal issues."

"We welcome more new players into the IBS arena as we believe that it is vital for us to collaborate with each other and leverage on each other's abilities and strengths. Only then can we unleash the full potential of IBS' buildability and benefits," Foong concluded.