### **CHAPTER**

# 6

# CONTRACTUAL ISSUES IN BIM INTERNATIONAL CONTRACT

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#### 6.1 INTRODUCTION

It is very much essential for any construction project to have a contract as it works like a bible to every contractual party. This is because when a contract has been breached by one party, the other party may seek legal remedies by referring to what was drafted in the contract. In case of any breaching contract event, the innocent party who financially harm suffered may; revoke or terminate the contract; or request specific performance of the contract or they may require the breaching party to perform their obligations under the contract. In this situation, it can be seen that the contractual relationship is vital, hence the contract shall be drafted carefully and with a trained guidance throughout the process.

At the international level, the implementation level of building information modelling (BIM) is indeed high, which goes parallelly with implementing the BIM contract. The Hong Kong Institute of Surveyors (HKIS) has taken a step forward as they have published their standard BIM contract conditions with the aim to carefully evaluate the suitability of these BIM contract conditions by contrasting them against the approaches taken by the United States and United Kingdom (Ho, 2021). According to Jo et al. (2018), there is a group of industry associations in the United States of America (USA) namely ConsensesDOCS has published a BIM Addendum to create a BIM Execution Plan and address the legal issues that are related to BIM. They also added that the USA had developed two BIM specific contracts which are the Document E202 – BIM Protocol Exhibit by The American Institute of Architects (AIA) and ConsensusDOCS 301 - BIM Addendum by the ConcensusDOCS.

In Singapore, the BIM technology has been effectively adopted. Therefore, there is a revision of BIM Guide version 1.0 of 2012 which now is called as the BIM Guide version 2.0 2013 and these two were commenced by The Building Construction Authority (BCA) of Singapore (Jo et al., 2018). On the other hand, the United Kingdom has also its own BIM contract which is the CIC Building Information Modelling Protocol, hereafter the CIC BIM Protocol (Ho, 2021). Due to the high implementation of BIM in their country, each to the mentioned country has taken its initiatives and has its own frameworks to cater to the legal and contractual issues related to BIM.

As the BIM implementation is quite high, especially at the international level, there are few countries that have published their own BIM contract in line with their high implementation of the BIM application. By hook or by crook, there are some legal issues that arise in the way that the BIM is implemented. In the essence of the international BIM contracts, the question of how these contracts are catered in addressing the legal issues are asked. Therefore, this study attempts to identify the potential legal issues relating to BIM and how the international SFCs address the potential legal issues.

# 6.2 BUILDING INFORMATION MODELLING AND CONTRACT

BIM is a technology that create and manage information of the construction project across the project lifecycle. Lorek (2021), mentioned that BIM is a process that is presently crucial and even mandated in

some regions in ensuring the planning, design and building construction to be highly effective and collaborative. It aids the construction players in digitally describing the aspect of the asset to be built. Models drawn are equipped with the information collaboratively and updated at key stages of the project. Parallelly with the implementation of BIM in many construction projects in the world, there are also the contracts that specifically or partially specify provisions relating to BIM. The contracts available are not particularly the contracts itself, some are the documents that support the usage of BIM and entitle the provisions in the documents. The documents relating to the BIM contracts may be in a form of guide, protocol or exhibit.

# 6.2.1 Identification of Building Information Modelling Contracts

Contracts that are relating to BIM are uncommon in the construction industry, and albeit exist, it is so far used a light touch in relation to BIM. In the Malaysia context, there is none of the available contracts, including the standard form, guide or protocol that support BIM. In 2015, there was an issuance of BIM Guide by the Department of the 1 Malaysia Housing Programme (PR1MA) which it was intended to design for affordable housing projects in the PR1MA programme in that year. However, the guide was just used for the purpose of that PRIMA housing project and again, the PRIMA BIM Guide was not proposed to be taken as a national BIM guideline. In contradiction, there are some of the contracts at the international level that support the usage of BIM and provide some provisions regarding BIM in the contracts. Some of the identified BIM contracts at the international level are; Singapore BIM Particular Conditions 2.0; AIA BIM Exhibit and AIA BIM Protocol Form by the American Institute of Architects; Hong Kong BIM Contract Condition; and UK CIC BIM protocol.