

## Temporary Easement Valuation for Construction Site

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**Abstract:** A temporary construction easement is necessary when construction activities require other lands for access roads. Previous studies related to temporary easement are rare and very little guidance and references to the practitioners during the process of valuation. Even though, the legal statutes and law cases provide some guidance but that is not enough for evaluating temporary easement. This research aims to identify the factors that affect the temporary easement and to define the process of temporary easement valuation. This research applied the embedded qualitative and single case design as the research strategy. Semi-structured interviews were conducted with the public valuers and land administrators. The data were analysed using thematic analysis. Research findings identified factors that affect the temporary easement valuation and defined the process of the temporary easement valuation. The results have benefited the valuation practitioners, land administrators and constructors.

**Keywords:** Construction Sites, Factors, Temporary Easement, The Valuation Process

### 1. Introduction

#### 1.1 Research Background

In recent years, easement valuation become a significant part of real estate valuation. The Malaysia Torrens System recognized rights that one landowner could acquire over the land of another, easement is one of the rights conferred over neighbouring land. Even the public or private sector may need the right of the easement to use other people's land for their specific purposes. When another person or company use the land without permission, the landowner had the right to acquire adequate compensation or payment. Therefore, the easement valuation can help the landowner to evaluate the

amount of compensation without losing their rights. The theory of real estate valuation deals with easement valuation from two aspects. First, an easement in the sense of encumbrance is dealt with as an extraordinary circumstance or legal characteristics that impact the change in the valuation of assessed land. Second, an easement is dealt with autonomously, as the object of valuation, for the definition of compensation. (Kroll, 2004; Kleiber, 2010)

Under the National Land Code 1965, an easement is a right granted by a proprietor of the servient land to the proprietor of the dominant land for the beneficial enjoyment of the latter's land. The proprietor of real estate under easement must be eligible for compensation for encroachment upon his property right. Proprietors of the governing land and land under easement are generally in apposition to agree on the level of compensation. If an agreement is not possible, the level of compensation for easement shall be assessed. (Osnovne, 2016)

In Malaysia, the construction industry contributes to gross domestic product (GDP) in the range of 3-6 per cent per year. The function of an easement is helping to sustain and encourage a systemised and progressive development of residential and industrial land usage (Australia Principle of property law, 2001). Easements are an important part of property development due to the diversity of rights represented and the status of the right. Easements are unlike the restrictive covenant. It is a proprietary creature; once created, it can confer an enduring and enforceable right upon the holder against the rest of the world (Samantha, 1998).

Furthermore, the easement can be classified as permanent or temporary depending on the duration of holding. Permanent easements (such as pipeline or water lines and cable lines), are perpetual and have a permanent effect on the title of the property (Sherwood, 2014). Temporary construction easements are also known as a temporary right of use in many cases at construction sites. Temporary easement usually terminates at the end of a construction project or the end of a specified use period (Snarjberg, 2015). In terms of space, three broad classes of easements exist which are surface, sub-surface and overhead. (Sherwood, 2014).

In addition, this research focuses on the temporary construction easement projects that would normally be for a project of two years or less. The appraiser must consider whether the existence of a temporary construction easement can restrict the property owner from using the unencumbered portion of the land for its highest and best use during the easement's term. This research aims to identify the most significant factors that influence temporary easement valuation and the process of temporary easement valuation.

## 1.2 Problem Statement

The lack of data and information related to easement valuation was a big challenge for valuers and other related parties who are involved in the easement valuation. According to Forbes (2014), the valuation of easement is crucial as very little literature and previous studies have been found. Moreover, the landowners may neglect their easement rights. The understanding of the easement and its legal rights of use are used to be among real estate practitioners like contractors and developers. Hence, landowners may lose their easement rights if they do not utilize their rights of easement on to the lands.

Furthermore, the valuation of temporary construction easement is based on improvised approaches and the 'rule-of-thumb' method. The method does not reflect or convey the fair market value of the temporary property right acquired (Eaton, 1982). However, in many cases, the valuer needs to identify whether the easement affects the use or utility of the property (Sherwood, 2014). This has become another challenge for the valuer to apply the most suitable approach or method to valuing the temporary easement.

As noted by Luvarid (1990) even though there are legal statutes and legal cases that offer information for easement valuation, the guidance for easement valuation and in particular, a temporary construction easement is not well in place. The legal interest determination for a temporary easement is heavily dependent on a reasonable and probable loss of the property and a speculative right. The value of compensation for a temporary easement at the construction sites shall reflect marketplaces on the proportional property interest lost by the owner and losses must be shown by demonstrated evidence and with reasonable certainty (Lusvardi, 1990).

Therefore, the focus of this research is to fill the gap in easement valuation at the construction site by exploring the factors and process for the temporary easement valuation at the construction sites in Malaysia.

### 1.3 Research Questions

- (i) What are the factors affecting the valuation of a temporary easement for a construction site?
- (ii) How to register a temporary easement?

### 1.4 Research Objectives

- (i) To identify the factors affecting temporary easement valuation for construction site.
- (ii) To define the process of temporary easement valuation and registration for construction sites.

### 1.5 Scope of the Study

The case study area is in Johor Bahru. The respondents are public valuers and land administrators. Qualitative research with face-to-face interviews was designed.

### 1.6 Significance of the Study

The results are beneficial to the valuation practitioners, land administrators, contractors, project managers and developers as well as a professional body.

## 2. Literature Review

### 2.1 Term and Definitions of Easement

An easement is defined in section 282 (1) of the National Land Code as 'any right granted by one proprietor to another, in his capacity as such and for the beneficial enjoyment of his land'. Section 282 (3) further explains that the land and the benefit of which the easement is granted is called the 'dominant land', and the land of the proprietor by whom is granted is called the 'servient land'. According to the Dictionary of Real Estate Appraisal, an easement is the "conveyance of certain property right, but not ownership, to a parcel of real estate". An easement is different to a lease because it does not give the holder a right of "possession" of the property, it only gives a right to use the land or property (Lesley, 2013).

Under the Principle of English Law, the easement can be created by grant, by custom, by prescription or by necessity. Easement rights cannot be created orally (Lesley, 2013). It must be in a written form or grant. However, according to Section 286, NLC 1965, a grant only can be made with the agreement of the proprietor of the servient tenement and effected by way of executing an instrument in Form 17 A.

As claimed by Wilson (2014), the creation of an easement must be satisfied four conditions. First, there must be a dominant tenement and a servient tenement. This means that there must be land that is benefited (dominant tenement) and land that is burdened (the servient tenement). Second, a dominant tenement and servient tenement must be owned by different people. Third, the easement must accommodate the dominant tenement. Fourth, the easement must be capable of forming the subject matter of a grant (Park, 1965). Sherwood (2013) stated that the creation of an easement conveys a portion of the total bundle of rights to a third party. Thus, the challenge for a valuer is to measure the market value of the rights conveyed.

The easements and their reversion are unique. A valid easement or right of way has a border that may be permanent or may be measured in a period. Easement boundaries are established in a way not inconsistent with regular property boundaries, and their retracement may also cause the retracing surveyor serious problems. By the survey problem associated with easement boundary location and

retracement, a surveyor may be sought to assist in the determination of reversionary rights. (Wilson, 2014)

## 2.2 The Type of Easement

Identified the type of easement must be considered the concept of time and space. Sherwood (2013) claims that regarding the time, the type of easement can be permanent or temporary. On the contrary, regarding the space, the type of easement can be including subsurface, surface, and overhead easement. Moreover, Snajberg (2015) supports the claim by saying that there are many types of easement about the duration of an easement or space. Besides, Herbst (2012) states that the type of easement in Turkey is according to powers provided such as usufruct, right of residence, right of building and right of access to water sources. However, most appraisers in the USA is supporting to the idea of Sherwood (2013). The type of easement has been summarized and explained in Table 1.

**Table 1: Type of easement (Sherwood, 2013)**

Concept	Type of easement	Description
Time	Permanent	It has a permanent effect on the title of the property
	Temporary	Generally used to facilitate the construction of a project and either terminate at the end of construction or the end of a specific use period
Space	Subsurface	consist of the construction of water and sewer lines, gas pipelines, communication lines, or tunnels described as the underground utility construction project
	Surface	only affects the surface area such as drainage, flowage, railroads, highways etc
	Overhead	most common overhead easements are electrical transmission lines and avigation easements

## 2.2 Approaches and Methods of Easement Valuation

A valuer can apply the before and after method or summation method to determine the compensation for the easement (Sherwood, 2013). Other considerations in the valuation of easement include the highest and best use, the larger parcel, mitigation, project influence and the larger parcel.

### *(a) Before and After Methods or the Federal Rule*

The ‘Before and After method’ is the best method for the valuation of easement because any change in the value of the remaining land can be considered by the valuer (Russell, 1984). These changes are referred to as damage or benefit. The ‘Before and After method’ is a judgement of the assessment of the property’s value before acquisition and the value of the residual after acquisition. Shapiro (2013) states that this method is used to assess the quantum of compensation payable for severance and injurious affection where part of a claimant’s land is taken.

However, the ‘Before and After method’ only focus on the loss of the remainder of land (Sherwood, 2013). If the remaining value has increased due to a benefit of the easement, the landowner of the remaining land may have no right to acquire any compensation.

Under Federal rule, the value of the easement can be based on the difference between the value of the whole property before encumbrance with the easement and the value of the property after the encumbrance with easement in general. The permanent utility easement may use this method to measure the compensation. The ‘Before and After’ value of property encumbrance with an easement is determined by using one or three common recognized methods such as the sale comparison approach, income approach and cost approach. (Laughlin, 2016). The ‘Before and After’ value is summarised and explained in Table 2.

**Table 2: Before value and After value (Laughlin, 2016)**

	<b>Approach</b>	<b>Description</b>
Before-Value	Sale comparison approach Income capitalization approach Reproduction cost approach	Determine the highest and best use of the property unrestricted by the easement
After-Value		Determine the highest and best use of the property as an encumbrance by the easement

*(b) Summation or piecemeal method*

The RICS suggests that the method of summing applies to investment firms or other asset classes, for which worth is mainly a factor in the prices of holdings. Sherwood (2013) indicates that the summation approach can also be used to determine serving and the value of the before and after methodology payment may be the same, except where benefits exist on the remaining land after purchase. Benefits may compensate for losses by this process, but the landowner still has the right to the value of the acquired portion. Mangione (2008) mentions that this system demanded that the amount of each compensation element payable be related to the formula. The formula of the summation method:

$$\text{Market value} + \text{Special value} + \text{Disturbance} + \text{Severance} = \text{Sum of compensation.}$$

*(c) Easement valuation matrix or Sherwood’s valuation matrix*

The easement valuation matrix was first established by Sherwood (2013) as a guideline for valuers. The easement valuation matrix is used to estimate the impact of easement from a total bundle of rights. The Bundle of rights are namely, the right of possession, the right of control, the right of exclusion, the right of enjoyment, and the right of disposition. The valuer measures the value of the rights conveyed to third parties. The matched pair sales analysis is used to support an opinion of compensation for the easement. When using matched pair sale analysis, the valuer needs to identify two similar sales, one encumbered with an easement and one without, and measure the effectiveness of the easement in the value of a property. One pair sale may not be enough to apply all situations of an easement. Therefore, the valuer requires multiple pairing sale analyses to establish a measurement effect or damage of easement. The easement valuation matrix is tabulated in Table 3.

**Table 3: Easement valuation matrix (Sherwood, 2014)**

<b>Type of easement</b>	<b>Interpretation</b>	<b>Charge (%)</b>
Overhead electric, flowage easements, railroad right of way, irrigation canals, exclusive access easements	Severe impact on surface use Conveyance of future uses	90% - 100%
Overhead electric, pipelines, drainage easements, railroad right of way, flowage easements	Major impact on surface use Conveyance of future uses	75% - 89%
Pipelines, scenic easements	Some impact on surface use Conveyance of ingress/egress rights	51% - 74%
Water or sewer lines, cable lines, telecommunications	Balanced use by both owner and easement holder	50%
Water or sewer lines, cable lines	The location along a property line location across a nonusable land area	26% - 49%

Air rights, water or sewer line	Subsurface or air rights with minimal effect on use and utility Location with a setback	11% - 25%
Small subsurface easement	Nominal effect on use and utility	0% - 10%

### 2.3 Temporary Easement Valuation

Previous studies on temporary easements show that each case of the temporary easement is unique due to its different location and shape. Others include sizes, slopes, earthen berms, and demolition (Christian, 2018). The term duration of the temporary easement is at the length of a maximum of 3 years (Uniform Appraisal the Federal Rule, 2016). Therefore, the temporary easement valuation was based on rental value and damage. Pattison (1986) revealed eight approaches for the valuation of temporary easement: full value, rate of return on land, normal rent, capitalised rent loss, percentage of fee value, lump sum, no payment and special benefit.

#### (a) Factors that impact temporary easement valuation

##### (i) Location

Kim (2004) & Hennerberry (1988) stated that location is considered in the easement valuation. The location indicators include zoning, utilities, traffic and transport, parking, environment, and government policies.

##### (ii) Type of land use

William (2006) identified that land-use regulations can affect the market value of property in a variety of ways. In Malaysia, there are three categories of land use namely agriculture, building and industry (National Land Code, 1965). Moreover, Shalaby (2014) stated that the supply of land is fixed, every parcel of land has a fixed area, which is a unique property, and land use would affect its value. Therefore, the type of land use also is a factor that affects the market value of the land.

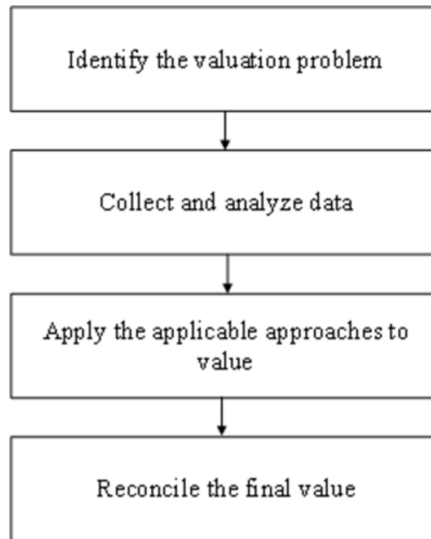
##### (iii) Income level and interest rate

Égert (2007) opined that income level and interest rate were economic factors that affect the price of the land. The relationship between the income level and rental value was positive means that when the income level overall rises the rental value also would grow. (Marco, 2008).

#### (b) The process of temporary construction easement valuation

Cruden, (2016) claims that the valuation of real estate like all scientific method methods begins with problem identification and concludes with communication of the results. The valuation process includes problem identification, the scope of work, data collection, data analysis, application of approaches to value, reconciliation and final opinion of market value, and report of the opinion of market value.

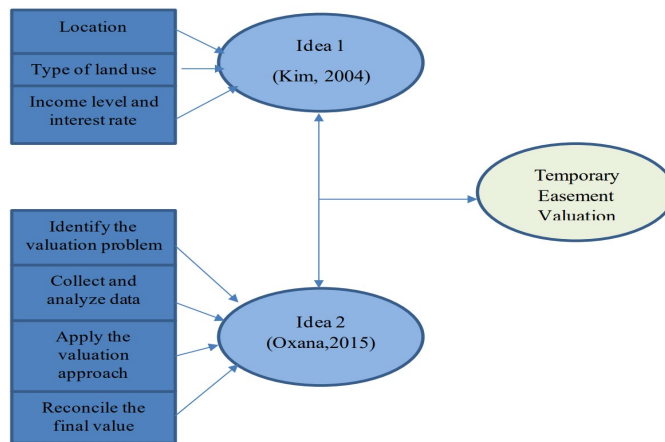
Oxana (2015) noted that the first step of the process of easement valuation is problem identification. The information required in the problem identification stage is known as relevant characteristics. Under the Uniform Standard of Professional Appraisal Practice, an appraiser must identify all characteristics of the property that are relevant to the type, value and intended users of the appraisal (Mark, 2010). Therefore, the appraiser or valuer in cases of temporary construction easement valuation should identify all relevant information such as location, land area, type of the easement, and so on. The process of easement valuation has been simplified by Oxana (2015) in Figure 1.



**Figure 1: Step of easement valuation (Oxana, 2015)**

### 2.4 Conceptual Framework

The development of a conceptual framework is to explain the path of research and grounds it firmly in theoretical constructs. In this research, the conceptual framework was focused on a qualitative approach which is interview and case study methods to collect the data to achieve the objective of the research.



**Figure 2: Conceptual Framework**

## 3. Research Methodology

### 3.1 Research Design

This research applied the embedded single case design as the research strategy. The case study research method has been widely adopted in qualitative research (Ishiyaku, Kasim & Harir, 2017). The researcher has chosen the types of purposive sampling was expert sampling. It is used when need the opinions or assessment of people with a high degree of knowledge about the study area. The sampled population of the research is the valuation practitioner who has experience in the valuation of temporary construction easements in Johor Bahru.

### 3.2 Data Collection Method

The semi-structured interview and case study method were chosen to collect data for the research. 3 respondents from public valuers and 1 respondent from the land administration office were identified and selected for sampling.

### 3.3 Data analysis techniques

Data from the interview were analyzed using thematic analysis. This method of analysis is one of the most common forms of analysis within qualitative research. Analysis of the data involved identifying, analyzing, and interpreting patterns of the transcribed data gathered.

## 4. Results and Discussion

### 4.1 Factors that affect temporary easement valuation for a construction site.

**Table 4: Factors affecting temporary easement valuation**

Factors affecting temporary easement valuation		R1	R2	R3	R4
1	Location	/	/	/	/
2	Type of land use	X	X	X	X
3	Interest and income level	X	X	X	X
4	Other factors				
	a) Plantation	/	/	/	/
	b) Percentage charge	/	/	/	/

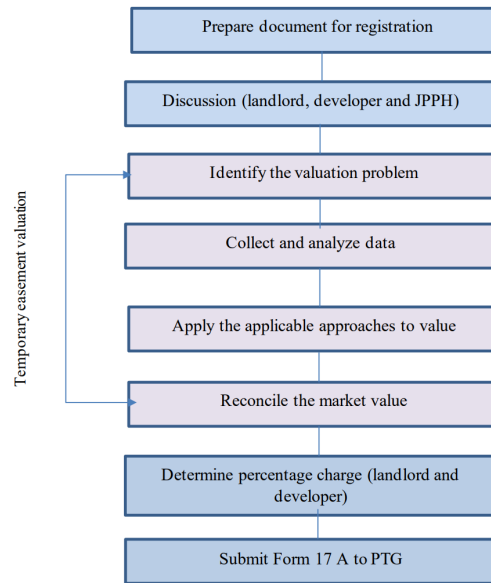
Based on Table 4, all respondents agreed that the location is the most significant factor affecting the easement valuation. For the type of land use facto, all respondents did not agree that the type of land use income level & interest factors directly affect the valuation of easement valuation at the construction site.

All respondents viewed that the plantation and percentage charges (%) shall be included in the easement valuation process. Plantation such as oil palm trees, durian trees and other trees has economic value and should be considered in the valuation of temporary easement. Moreover, all respondents agreed that the percentage charge was negotiated by the developer and landowner. The final value of the compensation for the temporary easement shall be determined after the market price of the land and percentage charges (%) are finalized. The findings revealed that only two factors (Location, Other Factors) affect the temporary easement valuation as compared to the literature review.

### 4.3 The Process of Temporary Easement Valuation and Registration for the Construction Site

Based on Figure 4, the findings are classified into eight themes. These eight themes are: prepare a document for registration, discussion, identify the valuation problem, collect and analyze data, apply the applicable approaches to value, reconcile the market value, determine percentage charge (%), and submit Form 17A to PTG.





**Figure 4: Process of temporary easement**

The first theme is preparing a document for registration. The documents are an agreement between servient and dominant, a copy of land tax receipt and current year gate tax, and an Original Release Title Document or DHKK (servient and dominant). The second theme is discussion. The land office arranges meetings for discussion about the temporary easement with the respective stakeholders comprised of the developer, the landowner, and the public valuer. The third theme is identifying the valuation problem. The valuer would identify the issues about the process of easement valuation on the subject land. The fourth theme is collected and data analysis. At this stage, all data related to temporary easements such as market data, subject property data and comparable data are gathered, compiled and analysed. The fifth theme is applying the applicable approach to value. All respondent’s responses used the comparison method to determine the market value of the land. The sixth theme is reconciled the market value. At this step, the market value is reported to the developer and landowner. The seventh theme is determining the percentage charge (%). All respondents mentioned that the percentage charge for the temporary easement is determined by the developer and landowner. Lastly, the eighth theme is to submit form 17a to PTG. The lawyer of the developer would submit 2 copies of Form 17A signed to the PTG or Land office. The findings from this research provide information related to the registration of temporary easement that is not explained in any literature and previous studies before.

## 5. Conclusion

In conclusion, this research identifies the factors that affect the temporary easement and defines the process of temporary easement valuation and registration. The research was limited to the Johor Bahru case study area and the respondents have only involved 4 respondents of public valuers and land administrators. It is recommended that future research would focus on the issues related to the easement valuation system. In Malaysia, easement valuation practice is still new compared to other countries. Eventually, the findings of this research were beneficial to the related stakeholders in the temporary construction easement industry. Moreover, the results of this research also can be a reference for those who intend to do further research topics in the same or related fields in the future

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